HYSYS® 2004.2
OLI Interface

Reference Guide

Copyright

October 2005

Corporate

Aspen Technology, Inc.	Phone: (617) 949-1000
Ten Canal Park	Toll Free: (1) (888) 996-7001
Cambridge, MA 02141-2201	Fax: (617) 949-1030
USA	Website http://www.aspentech.com

Technical Support

Online Technical Support Center

AspenTech customers with a valid license and software maintenance agreement can register to access the Online Technical Support Center at:

http://support.aspentech.com

You use the Online Technical Support Center to:

- Access current product documentation.
- Search for technical tips, solutions, and frequently asked questions (FAQs).
- Search for and download application examples.
- Search for and download service packs and product updates.
- Submit and track technical issues.
- Search for and review known limitations.
- Send suggestions.

Registered users can also subscribe to our Technical Support e-Bulletins. These e-Bulletins proactively alert you to important technical support information such as:

- Technical advisories
- Product updates
- Service Pack announcements
- Product release announcements

Phone and E-mail

Customer support is also available by phone, fax, and e-mail for customers who have a current support contract for their product(s). Toll-free charges are listed where available; otherwise local and international rates apply.

For the most up-to-date phone listings, please see the Online Technical Support Center at:

http://support.aspentech.com

Support Centers	Operating Hours
North America	8:00 - 20:00 Eastern time
South America	9:00 - 17:00 Local time
Europe	8:30 - 18:00 Central European time
Asia and Pacific Region	9:00 - 17:30 Local time

Table of Contents

1 HYSYS OLI Interface

1.1 Introduction

Many industrial processes are affected by many production and environmental concerns when dealing with electrolytes. A process cannot be designed and optimized effectively without comprehensively and accurately addressing electrolyte chemistry and phenomena. Electrolyte chemistry is particularly complex and challenging to understand and predict, especially for real industrial systems which contain many components and operate over broad ranges of temperatures, pressures, and concentrations. Many industrial operations need to be aware of the concerns of electrolyte chemistry in these processes and can include:

- Aqueous chemical and separations processes.
- Chemical conversion.
- Solution crystallization.
- Pharmaceutical and speciality chemical manufacturing.
- Reactive separations including acid gas treatment.
- Waste water treatment.
- Environmental behaviour of wastes, discharges, and accidental releases.
- Corrosion and scaling of equipment.

Simplified aqueous modeling and computational approaches using approximation are usually ineffective, and can be potentially dangerous, when applied to real process applications. Aqueous systems often behave in complex and unpredictable ways, introducing great risk into plant design and operation if they are not adequately understood and accounted for. On the other hand, reliable electrolyte models can ultimately provide tremendous insight, process alternatives, efficiencies in plant design, trouble-shooting, and optimization. This improves process economics, reliability, versatility, and meets environmental constraints.

The HYSYS OLI Interface package is based on OLI Systems software that provides clients with a theoretical framework, databases, data regression techniques, and applications software that comprehensively and accurately simulates and predicts electrolyte systems.

The HYSYS OLI Interface approach allows you to access OLI components and the OLI Engine, which is distinguished by the following unique elements:

- **Complete speciation**. The OLI model predicts and considers all of the true species in a solution, and accounts for these in the computations.
- **Robust standard state framework**. Based on the Helgeson equation of state and parameter regression and proprietary estimation techniques, the OLI model provides accurate equilibrium constants and other standard state properties over the broadest possible aqueous range of conditions.
- **Activity coefficients for complex, high ionic strength systems**. Based on the combined work of Bromley, Zemaitis, Meissner, Pitzer, and OLI technologists, OLI models can predict behaviour under real world conditions.
- **Comprehensive databank**. The Databank covers 79 inorganic elements and their associated compounds and complexes, and over 3000 organic chemicals. For customized coverage of clients' chemistry and private databanks, contact OLI Data Service.
- **Thermo-physical properties**. OLI has developed unique chemical-physical based models to compute thermodynamic and transport properties for complex aqueous environments and are provided by the HYSYS OLI Interface.

This unique and powerful electrolyte capability provides benefits in profitability through a host of applications in the oil and gas, chemicals, government research, pulp & paper, metals and mining, pharmaceutical, petroleum, and energy industries as has been the case of past OLI clients. The HYSYS OLI Interface package can be applied to many real industry applications, which are listed below.

Examples of the HYSYS OLI Interface Applications		
Emergency Chlorine Scrubber	Ahlstron NSSC "Stora" Process	Organic Acid Removal in Brines
Caustic Wash Tower	Tower Scale Control Foul Feed Stripper	BTEX Stripper
Acid Stream Neutralization	Multi-Effect Evaporator	MSF Desalination Plant
Removal of Fluoride Ions from Waste Water	Cooling Tower	Dregs Washer and Clarifier

Examples of the HYSYS OLI Interface Applications		
Scrubbing Refinery Process Streams with DEA	Coke Oven Gas	Hazardous Waste Deep Well Disposal
Chlor-Alkali Brine Treatment	Ammonia Still	Contaminated Ground Water Management

Hyprotech, in co-operation with OLI Systems is pleased to provide these capabilities in the HYSYS OLI Interface package.

1.2 Aqueous Electrolyte Systems

The HYSYS OLI Interface package provides the OLI facilities that allow the user to avoid complexities associated with aqueous electrolyte systems. This means that the user never has to:

- write an equilibrium reaction.
- define a true species in the aqueous phase (the user only provides the customary molecular chemical components).
- deal with any complexities associated with solving for the occurrence of other physical phases in addition to the aqueous phase.
- carry out any data regressions to develop model coefficients (these are all provided by the OLI databank).

Essentially, the description of process streams and process units is no different than with conventional simulation. For example, the following section details the use of a highly complex system of $H_2O/FeCl_3$ in which the user only deals with a two component system. Behind the scenes, the OLI software deals with the 14 true species in solution, the 10 equilibrium reactions in the aqueous phase, and the physical equilibrium between the aqueous phase and other phases. This may occur for any solid, vapour, and second liquid phase. The following sections will describe the complexities associated with aqueous electrolyte systems.

1.2.1 Speciation of Aqueous Electrolytes

Aqueous systems often behave in complex ways and introduce great risk into plant design and operation if not understood and accounted for. Electrolytes in water are challenging because many chemicals react with water to form one or more new species via chemical equilibrium reactions. The resulting process is often termed speciation.

A particularly complex system occurs when a single chemical compound, like ferric chloride (FeCl3) is dissolved in water. This results in 14 different species and a number of independent equilibrium reactions within the aqueous phase, which are listed below.

FeCl3 Species within the Aqueous Phase
H^+, OH^-, Cl^-, Fe^{3+}, $FeCl^{2+}$, $FeCl_2^+$, $FeCl_3$, $FeCl_4^-$, $FeOH^{2+}$, $FeOH_2^+$, $FeOH_3$, FeOH4$^-$, H2O, HCl

Independent Equilibrium Reactions within the Aqueous Phase	
$H_2O = H^+ + OH^-$	$FeCl_3 + Cl^- = FeCl_4^-$
$HCl = H^+ + Cl^-$	$Fe^{3+} + OH^- = FeOH^{2+}$
$Fe^{3+} + Cl^- = FeCl^{2+}$	$FeOH^{2+} + OH^- = FeOH_2^+$
$FeCl^{2+} + Cl^- = FeCl_2^+$	$FeOH_2^+ + OH^- = FeOH_3$
$FeCl_2^+ + Cl^- = FeCl_3$	$FeOH_3 + OH^- = FeOH_4^-$

The specific roster of species is usually confirmed by experimental means.

Together, this process of aqueous speciation via reaction and the physical equilibria with other phases, can produce unpredictable results. For example, one mole of ferric chloride dissolved in water produces a solution with a pH of approximately 2, making ferric chloride in water a fairly strong acid. This non-intuitive result occurs when OH^- combines with Fe^{3+} via a series of step-wise reactions, as shown in the above reactions. The depletion of hydroxide ions then causes the water dissociation equilibrium reaction to act to the right liberating more hydrogen ions.

Refer to **Chapter 2 - Examples of OLI Prediction** for a detailed discussion and comparison of OLI predicted and experimental results for this system.

Now, imagine the complexity of not just a single chemical compound in water but, rather, several compounds in a multi-component system. The opportunity for equilibrium reactions increases in such systems. An important and uncountable multi-component system is the four-component system water-ammonia-carbon dioxide-hydrogen sulfide.

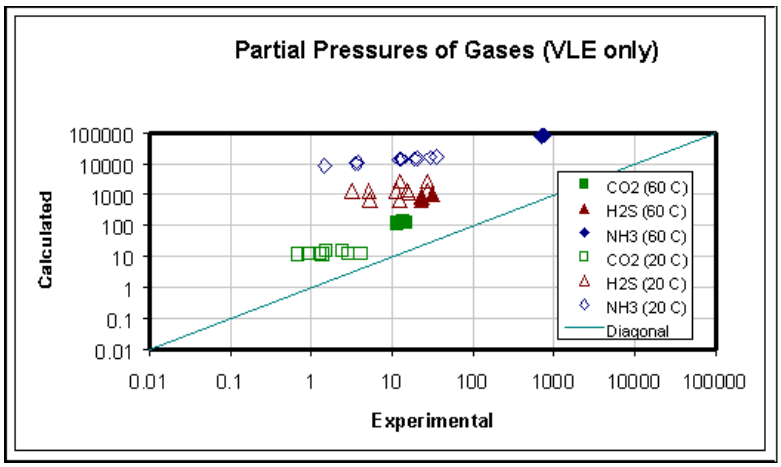
In this case, the list of species and reactions in the aqueous phase include the following.

Multi-Component System within the Aqueous Phase
H_2O, H^+, OH^-, CO_2, CO_3^{2-}, HCO_3^-, NH_3, NH_4^+, NH_2CO^{2-}, H_2S, HS^-, S^{2-}

Independent Equilibrium Reactions within the Aqueous Phase	
$H_2O = H^+ + OH^-$	$NH_2CO^{2-} + H_2O = NH_4^+ + CO_3^{2-}$
$CO_2 + H_2O = H^+ + HCO_3^-$	$H_2S = H^+ + HS^-$
$HCO_3^- = H^+ + CO_3^{2-}$	$HS^- = H^+ + S^{2-}$
$NH_3 + H_2O = NH_4^+ + OH^-$	

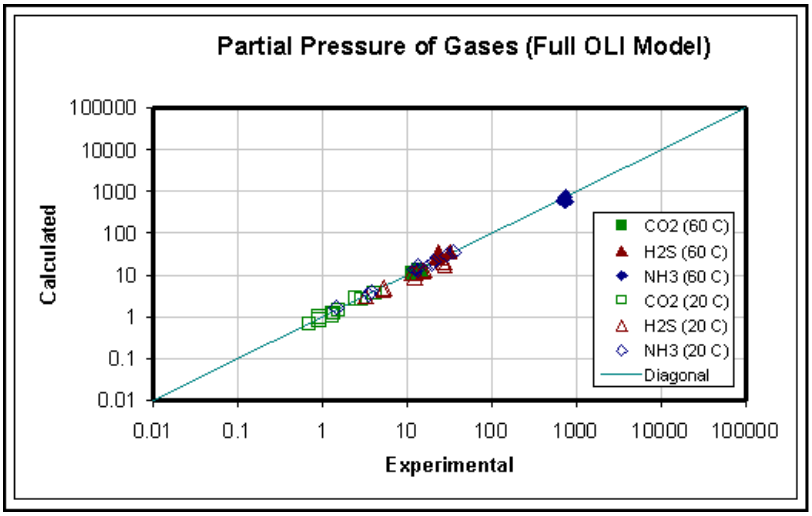
If the seven aqueous speciation equilibrium reactions (above) are ignored, and the standard thermodynamic properties for the VLE between H_2O, CO_2, NH_3, and H_2S in the aqueous and gas phases are taken, the errors in predicting VLE will be as high as several orders of magnitude. The errors are shown in the figure below with some points exceeding three orders of magnitude.

Figure 1.1



Based on complete speciation in the aqueous phase, a robust thermodynamic framework, and a supporting databank, the OLI prediction can be accurately illustrated and is shown in the figure below.

Figure 1.2



Electrolytes are not only formed by inorganic salts (e.g., FeCl3) and gases (e.g., ammonia), which dissolve in water. Many organic acids (e.g., formic acid) as well as other organic compounds dissociate in water and form ions. In addition, the resulting ions may form new species called complexes, ion pairs, or organo-metallic complexes by combining with metal ions. Many other organic compounds dissolve in water without dissociating.

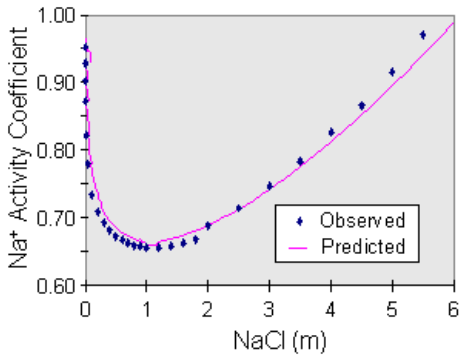
For almost all chemical compounds that dissolve in water, there are limits to their solubility. This solubility varies when other chemical compounds are present as well. Any attempt to dissolve more than the solubility limit will result in partitioning of the chemical compound to another physical phase. At room temperature, for example, this may be a solid phase in the case of dissolving sodium chloride, a gas phase in the case of carbon dioxide, or a second liquid phase in the case of benzene.

It is a formidable challenge to grasp a complete picture of thermophysical properties, speciation, and partitioning to other phases for a mixture of chemicals in water. The keys to solving this problem in the form of a predictive model is to obtain the correct speciation and then utilize state-of-the-art models to represent relevant thermodynamic properties of all species in the aqueous and related phases.

1.2.2 High Ionic Strength Systems

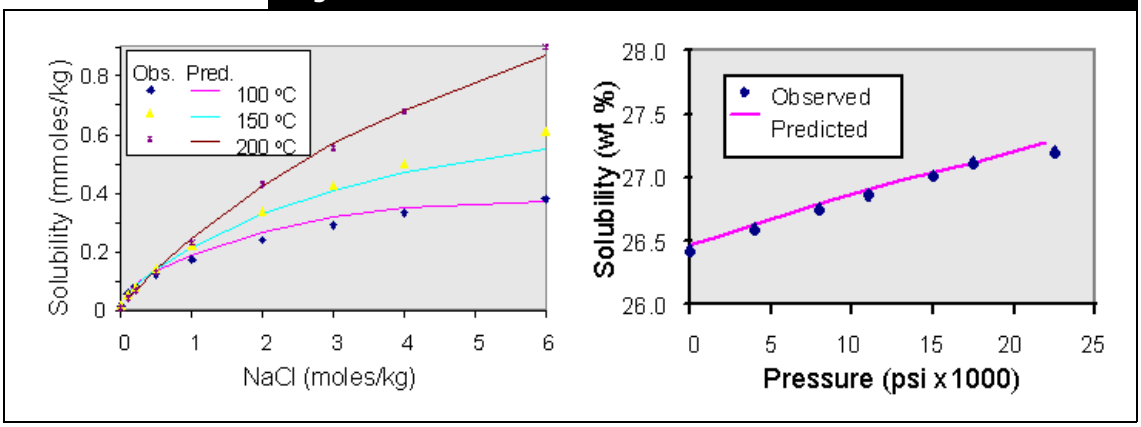
High ionic strength systems are particularly problematic for simple thermodynamic approaches. Previously, complexities of speciation for aqueous electrolyte systems were discussed. It is important to realize that these complexities are much more significant for systems with many components at high concentrations. Simplified methods are sometimes used for highly dilute systems, however, these methods are not valid for higher concentration multi-component systems typical of real industrial processes. For example, the unity activity coefficient $(\gamma = 1)$ assumption can lead to substantial errors as shown in the figure below.

Figure 1.3



At high concentrations, interaction of ions and molecular species with each other make the solvent very significant, which cannot be ignored. In addition, at high concentrations, the formation of complexes, as well as multi-component chemical interactions make accurate model prediction difficult. The OLI framework is the only one in existence that incorporates a robust, predictive activity coefficient model that can accommodate these severe non-idealities. Furthermore, the OLI in-place Databank includes coefficients resulting from thousands of data regressions based on the best available thermodynamic data for binary and many ternary systems. The accuracy of the OLI predictions is illustrated by the effect of temperature, pressure, and concentration in the figure below.

Figure 1.4

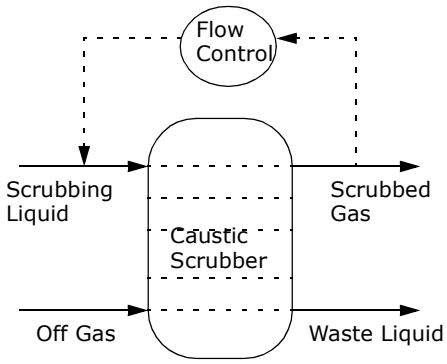


1.2.3 Process Application

Thorough understanding of aqueous electrolytes provides benefits, features, capabilities, calculations, and functionality for chemical process industries.

Consider a process application in which chlorine, a component of an off-gas product, is to be scrubbed with (10% by weight) sodium hydroxide solution. Several operating issues have evolved from this application. Given the current design configuration, the scrubbing efficiency is low.

Figure 1.5

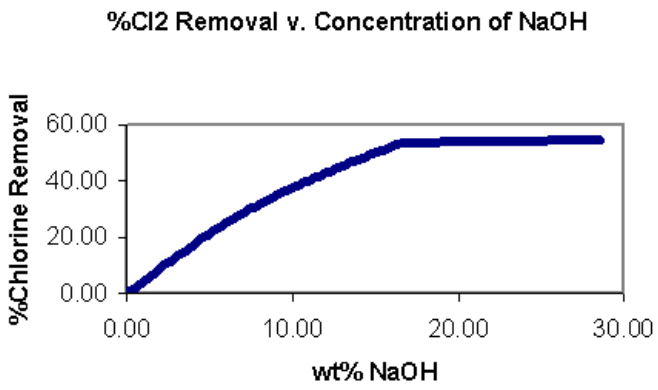


The plant operators increased the sodium hydroxide concentration from 10% (by weight) to 20% (by weight). In addition, the Waste Liquid from the scrubber was desired to have a pH > 8.3 for alkalinity control. The result of the change in concentration resulted in frequent fouling of the scrubber and an inability to control the pH.

Using the HYSYS OLI Interface package, plant operators found that increasing the concentration of sodium hydroxide to 20% (by weight) was inadequate in increasing the scrubbing efficiency.

The amount of chlorine removal is limited to approximately 50% at sodium hydroxide concentrations greater than 15% (by weight), as illustrated below.

Figure 1.6

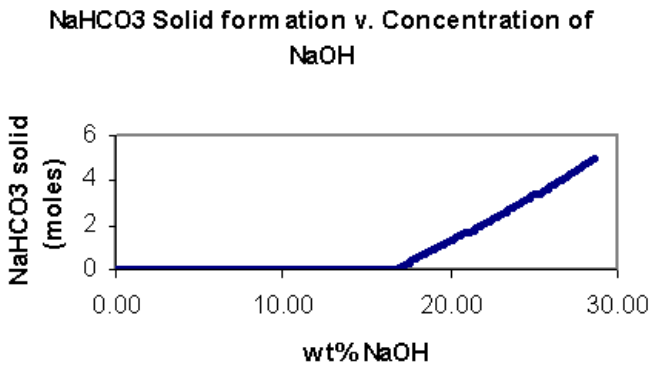


Plant operators noticed that the column fouled frequently at the high concentrations of sodium hydroxide, and that the off-gas contained carbon dioxide as well as chlorine.

Using the OLI_Electrolyte package, plant operators found that sodium bicarbonate was created when the sodium hydroxide concentrations was increased. At the 20% by weight concentration of sodium hydroxide, sodium bicarbonate (a solid) begins to form as illustrated in the figure below.

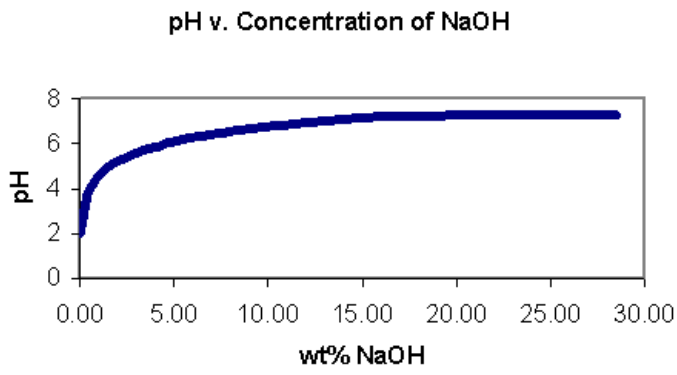
The plant operators confirmed the presence of this solid in their scrubber.

Figure 1.7



Another problem was that the specification of a pH > 8.3 could not be maintained. The HYSYS OLI Interface package determined the pH response of the chemistry underlying the process. The pH levels off at approximately 7.0 as the concentration of NaOH increases. This levelling effect is common in aqueous chemistry and is due to the presence of solid $NaHCO_3$ forming inside the scrubber. As long as this solid continues to form, the pH cannot increase as shown below.

Figure 1.8



Due to a lack of understanding of aqueous electrolyte systems amongst the chemical process industry, the ability to predict properties (e.g., pH) and phase separations associated with aqueous-based chemical systems is limited. In a limited number of situations (e.g., sour water systems) there are some correlations available for predicting VLE or SLE for aqueous-based systems. Designs and/or plant operations are usually based upon very conservative approaches (e.g., over-design) to avoid problems that could be predicted and avoided with the use of the HYSYS OLI Interface package.

A typical example is scaling in tower units. The formation of salts can result in scale formation within a tower, which will reduce a tower's effectiveness and, eventually, require shutdown of the unit and even the plant. With the OLI model, such salt formation is readily predicted and thus avoids altering operating conditions, the level of use of a reagent, or the addition of a scale inhibitor. All of these can be predicted via the HYSYS OLI Interface package based on OLI models.

1.3 Gibbs Free Energy

Refer to **Chapter 3 - Aqueous Thermodynamics** for detailed information on aqueous thermodynamics used in the HYSYS OLI Interface package.

There are five principal partial molal properties in each phase that will be discussed. They are the:

- Gibbs Free Energy
- Enthalpy
- Entropy
- Heat Capacity
- Volume

In particular, the focus is on the aqueous phase for which the thermodynamic approach is not well understood. The key to thermodynamic equilibrium in the aqueous intraphase speciation equilibria and the physical equilibria between phases is the Gibbs free energy (chemical potential). For every thermodynamic equilibrium reaction, the total Gibbs free energy for the species on the left side of the reaction must be equal to the total Gibbs free energy on the right side of the reaction.

An example of such a reaction is shown below.

$$CO_2 + H_2O \leftrightarrow H^+ + HCO_3^- \quad (1.1)$$

$$G_{CO_2} + G_{H_2O} = G_{H^+} + G_{HCO_3^-} \quad (1.2)$$

where:

G = Total Gibbs Free Energy

Refer to **Section 3.5 - Standard State** for more information on the defined Standard State.

The total Gibbs free energy can be further defined in terms of a Standard State Gibbs free energy (G^o) and an activity (a) as follows:

$$G_i = G_i^\circ + RT \ln(a_i) \quad (1.3)$$

where:

R = Gas Constant

T = Absolute temperature

Note that this definition is in terms of an activity rather than a concentration. To write this in terms of concentration, the notion of activity coefficient needs to be introduced, which captures the departure from ideality. In other words, the relationship between the activity of a species and the concentration of that species.

$$a_i = \gamma_i \times m_i \quad (1.4)$$

where:

γ = *activity coefficient*

m = concentration unit molality (aqueous systems)

Molality is defined as the number of moles of a species in a kilogram (approx. 55.508 moles) of water. Defining concentration in this way makes the concentration definition independent of density and therefore, temperature.

The standard state used for aqueous-based systems is the one most commonly used in literature. For any species other than water, the standard state is the concentration of a hypothetical one-molal solution of the species extrapolated to infinite dilution. This standard state is termed asymmetrical and is a function of temperature and pressure only. Rewriting **Equation (1.3)**:

$$G_i = G_i^\circ + G_i^E \tag{1.5}$$

where:

G_i^E = *Excess Gibbs Free Energy (RT ln(a))*

There are similar expressions to **Equation (1.5)** for all five principal partial molal properties. The other four (enthalpy, entropy, heat capacity, and volume) property expressions can be written as:

$$H = H^\circ + H^E \tag{1.6}$$

$$S = S^\circ + S^E \tag{1.7}$$

$$Cp = Cp^\circ + Cp^E \tag{1.8}$$

$$V = V^\circ + V^E \tag{1.9}$$

For Gibbs free energy, the excess term was directly related to the activity coefficient. For the other four properties, denoted above, the excess terms all relate to various partial derivatives of the activity coefficient. For example, the excess enthalpy directly relates to the first partial derivative of the activity coefficient with respect to temperature. The HYSYS OLI Interface aqueous thermodynamics is based on the OLI framework and detailed in **Chapter 3 - Aqueous Thermodynamics**.

1.4 OLI Thermodynamic Framework

Refer to **Chapter 3 - Aqueous Thermodynamics** for detailed information on Aqueous thermodynamics used in the HYSYS OLI Interface package.

OLI has developed a thermodynamic formulation for the thermodynamic properties (Gibbs energy, enthalpy, etc.) discussed in **Section 1.3 - Gibbs Free Energy**. The formulation is based on the Helgeson framework for the standard state terms and Bromley, Zemaitis, Pitzer, Debye-Huckel, and others for the excess terms.

The predictive nature of the OLI model is based upon the work of Harold Helgeson and co-workers. Helgeson and others have developed a predictive equation of state for the prediction of the partial molal standard state properties of any species within the aqueous phase. Dimitri Sverjensky contributed greatly in providing methods for estimating the coefficients of the equation of state for species where it is not practical to regress for the required coefficients. It is beyond the scope of this document to provide the specific formulas for the five principal standard state terms, however a general description is shown below.

$$\begin{aligned} G^\circ &= G(T, P, \omega, c1, c2, a1, a2, a3, a4) \\ H^\circ &= H(T, P, \omega, c1, c2, a1, a2, a3, a4) \\ S^\circ &= S(T, P, \omega, c1, c2, a1, a2, a3, a4) \\ Cp^\circ &= Cp(T, P, \omega, c1, c2, a1, a2, a3, a4) \\ V^\circ &= V(T, P, \omega, c1, c2, a1, a2, a3, a4) \end{aligned} \tag{1.10}$$

The parameters shown in each equation are equation of state coefficients that are unique to each species. In many cases, a1 through a4 can be ignored since these coefficients relate only to the effects of pressure on the properties of interest, and until pressures get above 100 atmospheres the effects of pressure are negligible. OLI has incorporated a Helgeson framework and estimation methods that allow data banking for the ω, c1, and c2 for virtually any species in water and a1 through a4 for most cases. Remember that equilibrium constants depend solely on

the individual G° values for the constituent species in each reaction. The OLI framework based on Helgeson can predict these individual G° values for any species in water, and therefore, can also predict any equilibrium constant. This fully predictive framework for standard state properties relieves the historic burden of speciation from the activity coefficients. Thus, the remaining compositional effects (called non-ideality) are placed on the activity coefficients without the speciation equilibrium.

As noted earlier, the excess properties relate to the activity coefficients. OLI's model for activity coefficients of ions has the following form:

$$\gamma = DH(\mathrm{I}) + BZ(\mathrm{I},\mathrm{T},\mathrm{m}) \qquad (1.11)$$

where:

DH = Debye-Huckel term which is a function of ionic strength

BZ = Bromley-Zemaitis term which is a function of ionic strength, temperature, and the individual species concentrations represented by m (the vector of species molalities)

I = ionic strength which is directly related to various ionic concentrations

The Debye-Huckel term completely describes the activity coefficient for very dilute systems.

1.5 Other Physical Phases in Equilibrium

Refer to **OLI_Electrolyte Options** (in **Chapter 2 - Fluid Package** of the **HYSYS Simulation Basis** guide) for information on including or excluding phases in HYSYS simulations.

The HYSYS OLI Interface package based on the OLI model takes into account the possible occurrence of other phases in equilibrium with the aqueous phase. It also provides databank support so that all required thermodynamic calculations are carried out automatically. Almost any solid that might form from an aqueous mixture is accounted for since the OLI model can simultaneously consider up to 250 possible solids that might precipitate from a mixture. In reality it is rare that more than five solids will actually precipitate at one time, but the model will correctly predict the precipitating solids. In addition, the model accounts for possible formation of a gas phase and a second (non-aqueous) liquid phase.

The condition for physical equilibrium between phases is that the total Gibbs free energy (chemical potential) is equal for the phases in equilibrium. The manner in which OLI calculates Gibbs free energy for the aqueous phase was established in **Section 1.3 - Gibbs Free Energy**. In this section, the OLI calculation of the Gibbs free energy for solids, gases and a second liquid phase will be described.

Refer to **Section 3.7 - Multi-phase Model** for detailed information on multiphase equilibrium models used in the HYSYS OLI Interface package.

Each solid in equilibrium with the aqueous phase is an independent phase, therefore, the Gibbs free energy is calculated for individual solids. This is shown in the classical thermodynamics definition in the following equation:

$$G_s = G_s^{Tr} + S_s^{Tr}(T - Tr) + \int_{Tr}^{T} Cp dT + \int_{Pr}^{P} V dP \qquad (1.12)$$

where:

Tr = reference state temperature of 298.15 K

For the gas and second liquid phase, the OLI model uses an enhanced SRK formulation for the thermodynamic properties. For the free energy, the classical formulation is used and shown below:

$$G_i = G_i^\circ + RT\ln(f_i c_i P) \tag{1.13}$$

where:

f_i = *fugacity coefficient of species i in the gas or non-aqueous liquid phase*

c_i = *mole fraction of species i in the gas or non-aqueous liquid phase*

1.6 HYSYS OLI_Electrolyte Property Package

The HYSYS OLI_Electrolyte property package models aqueous, conventional and other complex chemical systems. This package was developed in co-operation with OLI Systems, Inc. Through HYSYS, it allows you to access the OLI component databases as well as to the OLI engine for the automatic generation of the electrolytes chemistry model.

OLI_Electrolyte is an available property package option within the Simulation Basis Manager in HYSYS. The OLI_Electrolyte property package can model complex chemical phenomena, including:

- Intraphase Equilibria between aqueous, organic, vapour and solid phases.
- Intraphase Equilibria including redox and speciation reactions.

Refer to **Chapter 3 - Electrolyte Operations** in the **HYSYS Operations Guide** for detailed information on unit operations.

Three unit operations and a rigorous electrolytes column have been added to HYSYS for use in simulations involving electrolytes. The unit operations include the Neutralizer, Crystallizer, and Precipitator which are detailed in the **HYSYS Operations Guide**.

1.6.1 Electrolyte Calculation Techniques

The OLI_Electrolyte property package uses a highly advanced thermodynamic and mathematical framework for predicting the equilibrium properties of a chemical system. This predictive framework is based upon:

Refer to **Chapter 3 - Aqueous Thermodynamics** for detailed information on thermodynamic calculation methods.

- The revised Helgeson equation of state for predicting the standard state thermodynamic properties of all species, including organics, in water.
- The Bromley-Zemaitis framework for the prediction of excess thermodynamic properties.
- The Pitzer and Setschenow formulation for the prediction of the excess thermodynamic properties of molecular species in water.
- The enhanced SRK equation of state for the prediction of vapour and non-aqueous liquid phase thermodynamic properties. This enhanced equation of state applies to organics which are sparingly soluble in water, and which form a second liquid phase that is nearly ideal.

1.6.2 Electrolyte Components

Refer to **Section 1.2.4 - Adding Electrolyte Components** in the **HYSYS Simulation Basis** guide for information on adding database components to a HYSYS simulation.

Refer to **Section 1.8 - HYSYS OLI Interface Component Databases** for more information on component databases.

All electrolyte features are accessed through the HYSYS interface. This package does not use the HYSYS component databases, but rather accesses the OLI databases, which include information required for generating the chemistry models. There are two databases available with this package. Each database offers identical HYSYS functionality but differs with regard to the number of available components.

- **Limited**. The standard 1,000 component databank. Components in this database are of most interest to the process industries. The electrolytes limited database is a subset of the Full database.
- **Full**. An extended 3,000 component electrolyte database. The Full database also includes the GEOCHEM (mineral components) electrolytes database.

The following functions are not supported in HYSYS when using the OLI_Electrolyte property package compared to the traditional components.

- Classification of components is based on their type; all components are classified as miscellaneous (you can not use the family filter).
- The Synonym, formula, and name columns in the component selection form are the same.
- Oil mixtures and hypothetical components are not available. To add hypothetical components, a private database must be created and specified in the Private User Database option.

If water is not added or selected as a component, HYSYS will add it automatically.

1.6.3 Chemistry Model Generation

When all components are selected, HYSYS automatically generates the chemistry model which is required to perform flash calculations. HYSYS predicts all possible species in each phase that could exist in the chemical system defined by the selected components and the optional phases and adds them to the chemistry model.

When the model has been successfully generated, the OLI Engine is initialized via the Initialize Electrolytes Environment button in the Fluid Package Basis property view and calculations begin.

1.6.4 Electrolytes Nomenclature

To accommodate the electrolyte package in HYSYS, some HYSYS nomenclature has been modified and properties have been added. Key properties pertaining to electrolyte simulations, such as pH, molality, ionic strength, osmotic pressure, heat capacity, and viscosity may be accessed through the Electrolytes page on the Worksheet tab for a stream operation.

The HYSYS specifications have also been modified to accommodate the characteristics of the electrolyte system by incorporating both molecular and ionic component information.

When discussing the components in a HYSYS OLI Interface case, it is necessary to distinguish between two different sets of species:

- **Apparent** (or molecular) species.
- **True** includes apparent and ionic species.

Apparent (Composition page) and True Species (Electrolytes page) can be found on the Worksheet tab of the stream property view for electrolyte simulations.

The apparent components include all molecular components that are either selected, or may form through ionic reactions. The apparent components do not include any ions that may be formed through reaction of the components. The apparent species are a subset of the true component group.

The true species or components include all of the apparent species as well as ions formed through reactions or dissociation in the aqueous phase.

As an example, a user specifies a fluid containing apparent components H_2O, NH_3, and H_2S. The ionic reactions may be given as:

$$\begin{aligned} H_2O &\leftrightarrow H^+ + OH^- \\ NH_3 + H_2O &\leftrightarrow NH_4^+ + OH^- \\ H_2S &\leftrightarrow H^+ + HS^- \\ HS^- &\leftrightarrow H^+ + S^{2-} \end{aligned} \tag{1.14}$$

The apparent species are H_2O, NH_3, and H_2S. The true species include the apparent species as well as H^+, OH^-, NH_4^+, HS^-, and S^{2-}.

1.6.5 Electrolyte Properties

The true species properties can be found on the Electrolytes page of the Worksheet tab (Stream Property View) in a HYSYS simulation case.

There are properties used in this documentation which are specific to electrolytes chemistry and are not commonly referred to in other HYSYS documentation. In order to facilitate the use of this documentation, some of these properties are defined in the following table:

Property	Description
Molal Concentration	The number of moles of solute per kilogram of solvent. In HYSYS, the solvent is always water.
pH	Expresses the acidity of aqueous solutions. It is calculated by taking the negative logarithm of the hydronium ion in a solution: $$\mathrm{pH} = -\log[H_3O^+]$$ $$\mathrm{pH} = \log\frac{1}{[H_3O^+]}$$ The greater the acidity of a solution, the lower the pH value. Likewise, the more basic a solution, the higher the pH. Although the pH scale is typically considered to range from 0 to 14 with a completely neutral solution having a pH of 7, pH may extend beyond the general scale. This includes negative pH values for very acidic solutions, and pH values greater than 14 for extremely basic solutions.
Ionic Strength	A value which relates to the charge of a solution given by the equation: $$I = 0.5\sum c_i z_i^2$$ *where:* I = *ionic strength* c_i = *concentration of the ion i* z_i = *charge of the ion i*

Property	Description
Osmotic Pressure	Osmosis is the process by which solvent passes spontaneously through a semi-permeable membrane, separating solutions of different concentration from the region of lower solute concentration to the region of higher solute concentration. Solvent molecules pass from the region of higher concentration to that of lower concentration, but the net rate of solvent flow is from the lower to higher concentration regions. There will continue to be a net flow rate of solvent particles through the membrane as long as there is a concentration gradient across the membrane or until the hydrostatic pressure from the solution of greater concentration forces solvent particles against the gradient to equalize the flow rate. The hydrostatic pressure exerted under this condition is called the osmotic pressure. The osmotic pressure, π, of a solution is dependent on the number of solute particles present in the solution. For dilute aqueous solutions, the equation is: $$\pi = MRT$$ *where:* *M = molarity of the solution* *R = ideal gas constant* *T = temperature of the solution* Temperature of the solution is significant because it affects the number of solvent-membrane collisions per unit time.
Specific Electrical Conductivity	The specific electrical conductivity is expressed in the following relation: $$Ls = L\frac{l}{A}$$ *where:* *L = electrical conductivity (1/ohm)* *l = length of the conducting media (m)* *A = cross sectional area of the conducting media (m^2)*
Molar Electrical Conductivity	The molar electrical conductivity is expressed in the following relation: $$\Lambda = Ls\frac{1000}{C_N}$$ *where:* *Ls = specific electrical conductivity* *C_N = concentration of the electrolyte solution*

1.6.6 Disabling Solid Components

Refer to **OLI_Electrolyte Options** (in **Chapter 2 - Fluid Package** of the **HYSYS Simulation Basis** guide) for more information on including and excluding solid components.

When the solid phase is included in a case, the electrolytes engine generates a model that predicts all possible solid species, including hydrates, for the system. Depending on the number of components in the case, a model that is difficult for the system to efficiently handle may result.

HYSYS allows you to disable any of the solid components in a case via the OLI_Electrolyte Property Package Basis property view. Selective disabling of solid components that are not of interest to a simulation result in faster execution and convergence times. To disable solid components from a case, select the Selected Solid button in the Fluid Package Basis property view for the OLI_Electrolyte property package. Once selected, the Selecting Solid property view appears with all of the predicted precipitates and hydrates for the case.

HYSYS also allows you to disable solid components for a particular stream. Any solid in a stream may be excluded by selecting the Solid radio button in the Phase group of the Electrolytes page of the stream property view. Disable the solid by clicking on the Include checkbox for the particular solid(s) to be removed from the calculations. After disabling any solid(s), trigger the solver so it performs a stream flash excluding these solid(s) in the calculation.

When solid components are excluded, HYSYS is required to recalculate the model before you proceed with a case. You can consult the calculated scaling tendency of a solid (described in the next section) to determine its significance to the case.

1.6.7 Scaling Tendencies

Refer to **Section 3.8 - Scaling Tendencies** for the thermodynamic calculation techniques.

The scaling tendency of a solid refers to its tendency to form at the specified stream conditions. Solids with a scaling index greater than one will form if:

- the solid formation is governed by equilibrium (as opposed to kinetics)
- there are no other solids with a common cation or anion portion which also has a scaling tendency greater than one.

If more than one solid exists with a common ion and the scaling tendencies are greater than one, then at least one of the solids will form. Scaling indices can be used to determine which solids can be safely removed from the model.

The scaling index of a solid is calculated with stream properties and can be viewed by selecting Properties for the True Species Info group and selecting Solid as the phase on the electrolytes stream property view.

1.6.8 HYSYS Column Operation

For a detailed description of the column unit operations, refer to **Chapter 3 - Electrolyte Operations** in the **HYSYS Operations Guide**.

The electrolytes column characteristics are very similar to those of any HYSYS column available using other available HYSYS property packages. Column conventions, commands and methods by which you create and run the columns are, for the most part, the same in the HYSYS OLI Interface. However, there are some important differences that must be discussed to aid in the building and running of the column within this package.

This section will cover only those column methods that differ from the traditional functions of the HYSYS column.

Basic Column Configurations

There are five basic types of column templates available for the OLI_Electrolyte property package:

- Distillation Column
- Refluxed Absorber
- Absorber
- Reboiled Absorber
- Liquid-Liquid Extractor

When using the electrolytes package, you cannot modify the column templates as you can in the standard HYSYS column environments. Insert a column as you would any unit operation by selecting it from the object palette or by adding an operation through the Flowsheet menu. The input fields that appear are similar to the standard HYSYS column fields with the following exceptions:

- Flows can only be specified on a mole basis. Although, the displayed results can be viewed on a molar, mass, or liquid volume. basis.
- Exchanger duties must be specified for column operations.

Plots

The Plots page can be accessed from the Performance tab of the column environment. Tray by tray electrolyte properties can be viewed either in a graph or table by selecting the Electrolyte Properties option. Electrolyte property profiles can be seen versus tray number for pH, ionic strength and if there are solids - the scale index profiles can be viewed.

For more information on true and molecular species, refer to **Section 1.6.4 - Electrolytes Nomenclature**.

The Electrolytes group allows you to select between True Flow and Molecular Flow for viewing property profiles. True flow includes ionic effects as well as molecular species. Molecular (apparent) flow includes molecular components either selected or which form from ionic reactions. They do not include ionic effects that are formed through reactions. All other property views inside the column environment represent True flow.

Column Specifications

The biggest difference you will most likely encounter when adding a column to a case using the OLI_Electrolyte property package involves the methods by which column specifications are defined and changed. OLI columns have pre-defined specifications, where as, traditional HYSYS columns are flexible. With the OLI_Electrolyte package, specifications are for the most part not replaceable like HYSYS packages.

An Electrolytes column has a set of variables, which depending on the equipment, must be specified. The following table lists the column equipment and the specifications required when added to a column:

Equipment	Specification	OLI Restrictions
Side Draw	Draw Rate	10 Draws
Side Exchanger (Condenser, Reboiler)	Exchanger Duty	
Pump Around	Pump Around Rate and Duty	5 Pump Arounds
Feeds		10 Feed Streams

It should be noted that pump arounds are also considered to be draws. Therefore, if you have five pump arounds, you can specify five more draws. Additionally the following should be noted:

- **Tray Efficiencies**. The Murphree tray efficiency for all stages may be specified. The efficiencies can be specified on a stage-by-stage basis. They can also be specified by component efficiency type as well as overall efficiency.
- **Total Condenser**. The distillate rate, reflux rate and reflux ratio may be specified. In order to install a total condenser, a column with a condenser should be installed and Total should be selected as the condenser type. Simultaneously, appropriate specifications (distillate rate, reflux rate or ratio are installed and activated). The decanter is only available with organic liquids (two liquid phase). Aqueous liquids are refluxed and the organic liquid is flashed and drawn out in the condenser.
- **Pump Arounds**. Pump arounds operate from the bottom (draw) to the top (return) stage for the HYSYS OLI Interface. Pump arounds cannot overlap, that is, the draw stage must be on a higher stage than the previous

pump around return stage. Also, pump arounds require aqueous liquids only. Standard HYSYS is flexible and allows the user to operate pump arounds from higher stage to the lower stage or from the lower stage to the upper stage.

OLI Specs

Although, the electrolytes column specifications are fixed, control variables may be added for the fixed specifications. A control variable is an active specification that adjusts to reach the value of the target specification. For instance, a side draw on an absorber requires that the draw rate be specified. A control can be set over the draw rate specification so that another variable can be specified. A control may be the flow rate of a particular component in the stream, or the stream temperature. When the column solves, the side draw rate will be adjusted to meet the target specification. A list of the available target specifications include:

- Tray temperature
- Tray vapour, liquid, or side draw flow rate
- Tray vapour, liquid, or side draw component flow
- Tray vapour, liquid, or side draw component fraction

The following are active spec control variables:

- Draw flow
- Pump around flow
- Duty
- Pump around duty

Active spec control variables can be accessed via the Specs page of the Design tab in a column environment.

It is important to remember that when a control variable is added over a specification, the specification becomes an initial guess. Therefore, you should keep in mind that even though a control variable is being placed over a specification, the specification value is important as a good initial guess will help HYSYS calculate the column quickly and efficiently.

The available target specifications property view has the **OLI Spec** button. This button activates where you can specify control variables and set the **Active** status of the OLI spec. This can also be done from the **Specs Summary** page.

Although the process of adding controls over specifications in the Electrolytes package seems restrictive compared to the usual HYSYS column specification method, it is actually an equivalent method. The difference is that the usual HYSYS algorithm formulates the specifications directly into the column solution. The column algorithm used in the Electrolytes package does not have the specifications built into the solution and therefore the column formulation is built with a fixed set of variables that includes the basic specifications. Initial guesses are required for the basic variables. As such, the column requires specifications for all the basic column parameters.

Column Streams

It should be noted that column streams may have slightly different results compared with stream flash results. You can cross check between the two stream results via the object navigator in the Flowsheet menu. The internal (COL) column stream results are directly based on the OLI column solver. The external stream results are calculated by the stream flash. Also, osmotic pressure, heat capacity and viscosity properties are not calculated internally in the column, but rather calculated by the stream flash.

1.6.9 Electrolyte Stream Flash

The electrolyte stream flash differs from the HYSYS material stream flash to handle the complexities of speciation for aqueous electrolyte systems. The HYSYS OLI Interface package is an interface to the OLI Engine (OLI Systems) that enables simulations within HYSYS using the full functionality and capabilities of the OLI Engine for flowsheet simulation.

When the OLI_Electrolyte property package is associated with material streams, the streams exclusively become electrolyte

material streams in the flowsheet. That is, the stream conducts a simultaneous phase and reaction equilibrium flash.

An electrolyte material stream in HYSYS can perform the following types of flashes:

- TP Flash
- PH Flash
- TH Flash
- PV Flash
- TV Flash

Due to the involvement of reactions in the stream flash, the equilibrium stream flash may result in a different molar flow and composition from the specified value. Therefore, mass and energy are conserved for an electrolyte material stream against the HYSYS stream for mass, molar and energy balances.

Limitations exist in the HYSYS OLI Interface package in the calculation of the stream flash results. The calculation for the electrolyte flash results must fall within the following physical ranges to be valid:

- composition of H_2O in aqueous phase must be > 0.65.
- Temperature must be between 0 and 300°C.
- Pressure must be between 0 and 1500 atm.
- Ionic strength must be between 0 and 30 mole/kg-H_2O.

Refer to **Section 1.8.3 - Special Databases** on **LOWTEMP** for more information.

A additional low temperature database that extends the range to -50 to 300°C can be added.

1.7 Range of Applicability

The HYSYS OLI Interface package supports predicted frameworks and calculates (flash) equilibrium for aqueous systems. The package allows chemical systems to be accurately simulated over the following conditions.

1.7.1 Aqueous Systems

The range of applicability for an aqueous system is shown in the table below:

Properties	Aqueous Systems
Temperature	0 - 300°C
Pressure	0 - 1,500 atm
Mol Fraction of water within the aqueous liquid phase	0.65 - 1.0
Ionic Strength	0 - 30 molal

Refer to **Section 1.8.3 - Special Databases** on **LOWTEMP** for more information.

A additional low temperature database that extends the range to -50 to 300°C can be added.

1.7.2 Non-Aqueous Liquid

- Currently, there are no separate activity coefficient models available, for example, the NRTL, UNIFAC, or UNIQAC.
- Non-aqueous and vapour fugacity coefficients are determined from the Enhanced SRK[1] Equation of State.
- vapour critical parameters (T_c, P_c, V_c, and ω^2) are correlated to find a fugacity coefficient.

1. G. Soave. Chem.Eng. Sci.27,1197(1972)

1.7.3 Gas & Second Liquid Phase

The OLI model that is used for the gas phase and second liquid phase is based on an enhanced SRK equation of state. Due to the limits of the SRK equation of state, certain non-ideal second liquid phases may not be predicted accurately.

1.7.4 Multi-Component Systems

Another limitation is for multi-component systems with more than three components plus water.

The OLI model includes data regression for an enormous number of chemical systems and is provided in the HYSYS OLI Interface package. In general, all single components plus water have been regressed.

The accuracy of typical binary system predictions at different temperatures are illustrated in the figures below:

Figure 1.9

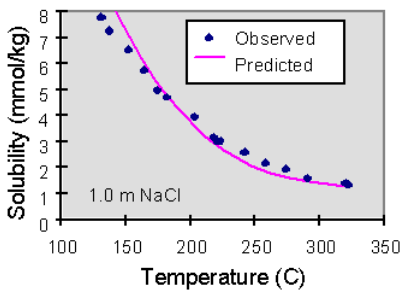
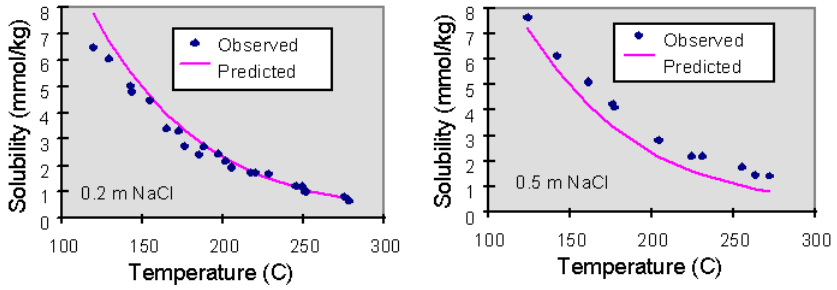


Figure 1.10



In addition, many ternary systems (water plus two other components) have been regressed together with the constituent binary systems.

Refer to **Chapter 2 - Examples of OLI Prediction** for other examples of predicted data fits.

The ternary system predictions compared to experimental data are illustrated in **Figure 1.11** and **Figure 1.12**.

Figure 1.11

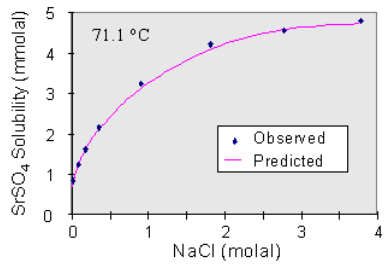
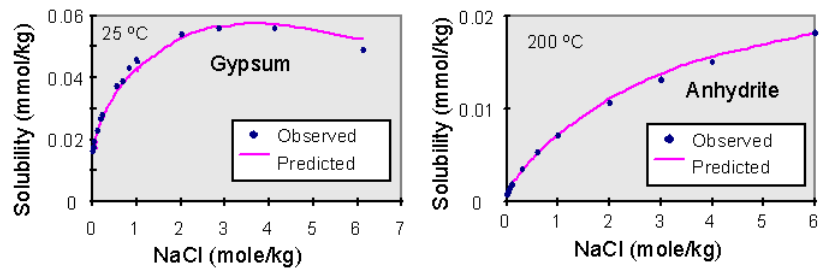


Figure 1.12



In **Figure 1.12**, the unusual behaviour of gypsum at 25°C and high NaCl concentrations (there is a maximum gypsum solubility at an intermediate NaCl concentration) should be noted. This behaviour could not be predicted with less rigorous models, but is accurately predicted by the HYSYS OLI Interface package using OLI models.

For regressed systems, the error between predicted and experimental values is generally less than 10%.

For all multi-component systems (with more than three components plus water), the OLI model relies on some estimation/prediction methods. The key to these systems is whether or not the subsystems defined by water together with components present in excess of 1 molal concentration have been subjected to data regression by the OLI framework.

The HYSYS OLI Interface package provides well over 100 systems which have been regressed by OLI.

If the system is not, the predictions will usually be good qualitatively but fairly substantial errors (25+%) may result in the actual predictions. For most common ternary systems (e.g., $H_2O/NH_3/CO_2$, H_2O/CO_2/NaCl), it is safe to assume that OLI models include the required ternary system regressions.

1.8 HYSYS OLI Interface Component Databases

The HYSYS OLI Interface package includes the Full database, Limited database and the Special databases (i.e., **GEOCHEM**, **LOWTEMP**, and **REDOX**) components. The Full and Limited databases offer identical HYSYS functionality but differs with regard to the number of available components. The Special databases extend the range of applicability of the Full database to include unique components (e.g., minerals, and pure metals) and properties under special conditions (e.g., below 0°C).

1.8.1 Full Database

The Full database of electrolyte components is listed in **Appendix A - HYSYS OLI Interface Full Database**.

Full database covers 5041 species. In terms of inorganic chemistry, this includes much of the aqueous chemistry in water (including speciation reactions) for 79 inorganic elements from the periodic table (including actinides, heavy and precious metals) and their associated aqueous species. In addition, the databank covers over 3000 organic chemical compounds (including electrolytes, chelates, and organo-metallic species). Computed thermodynamic properties such as pH, ionic strength, enthalpy, density, osmotic pressure are supplied from the database.

Refer to **Section 1.8.4 - Private User Databases - OLI Data Service** to for more information.

The aim of the package is to cover any species that is of interest to clients and process industries. However, if a species is missing or does not cover the range of conditions of interest, the OLI Data Service is provided.

1.8.2 Limited Database

The Limited database contains 2,187 standard components that are of most interest to process industries. It is limited and is a subset of the Full database.

1.8.3 Special Databases

HYSYS supports three OLI special databases:

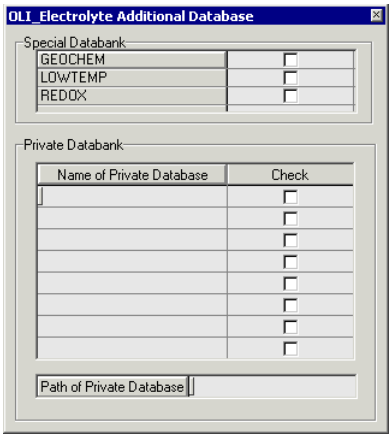
- GEOCHEM
- LOWTEMP
- REDOX

Refer to **Section 1.2.4 - Adding Electrolyte Components** in the **HYSYS Simulation Basis** guide for more information on the Component List property view.

To access the OLI_Electrolyte Additional Database property view, click on the **Additional Database** button in the Component List property view.

You can add one or more special databases to the Full database by selecting the special database(s) in the OLI_ Electrolyte Additional Database property view.

Figure 1.13



OLI has a few other databases that are generally distributed with the product. All other Special Databanks that are provided with the OLI Engine (but are not currently in HYSYS OLI Interface) are not provided to contribute to the speciation but, rather, help to support the products in other ways.

GEOCHEM

The GEOCHEM electrolyte Database components are listed in **Appendix B - HYSYS OLI Interface GEOCHEM Database**.

The GEOCHEM databank is supported in the HYSYS OLI Interface package. The databank is separated from the public since it contains many solids, which only form via thermodynamic equilibrium after long periods of time (often thousands of years). They are solids that form in nature and are often different from the form of a solid that may form in a much shorter amount of time (usually instantly) within a process. Thus, the GEOCHEM solids tend to form through aging of the aqueous environment in contact with a source of the elements comprising the solids.

LOWTEMP

The LOWTEMP database provides an accurate thermodynamic framework for calculating the physical and chemical properties of multi-phase, aqueous systems at low temperature. The LOWTEMP database covers exactly the same electrolyte components as the Full database, except that the LOWTEMP database extends the applicable temperature range to -50°C to 300°C.

REDOX

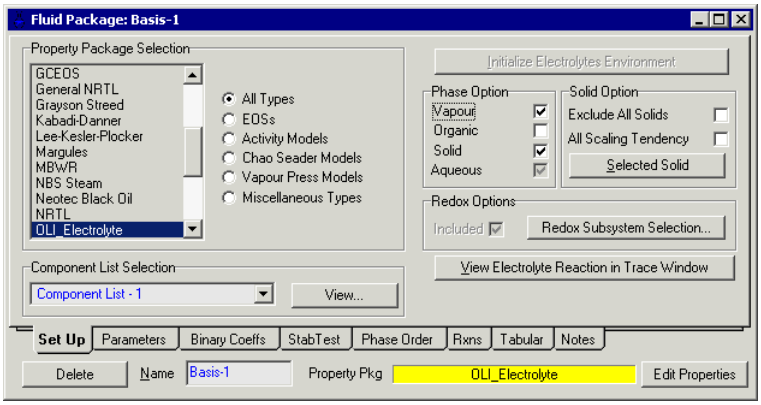
The REDOX database supports calculations involving the reduction and oxidation of pure metals and alloys to simulate the corrosion process in aqueous system. The REDOX chemistry can be studied for real solution, including trace components. Once you activated the REDOX database and selected the desired components, OLI automatically generates a matrix of all possible redox subsystems. Each redox subsystem consists of a collection of species containing a given element in any oxidation state.

You can activate an individual redox subsystem by performing the following:

1. From the Fluid Package property view, select the **Set Up** tab.
2. In the Property Package Selection group, select the **OLI_Electrolyte** fluid package.
3. Click on the **Redox Subsystem Selection** button in the Redox Options group.

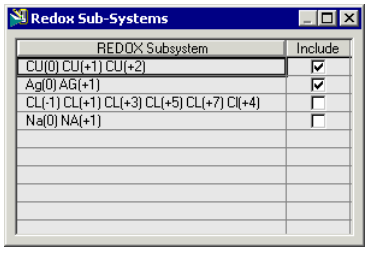
Refer to **Chapter 2 - Fluid Package** in the **HYSYS Simulation Basis** guide for information on adding fluid packages.

Figure 1.14



4. The Redox Sub-Systems property view appears. You can include the desired redox subsystems by selecting their corresponding checkboxes.

Figure 1.15



By default, OLI REDOX selects the redox subsystems that contain metals of engineering importance. This default is motivated by corrosion applications, for which redox transformations of engineering metals are important.

5. Click on the **View Electrolyte Reaction in Trace Window** button to view all the electrolyte reactions involved for the selection.

   If the **View Electrolyte Reaction in Trace Window** button is disabled, click on the **Initialize Electrolytes Environment** button in the Fluid Package property view to activate the electrolyte system.

In principle, you can select all redox subsystems. However, this will most likely result in time-consuming calculations. Therefore, a careful selection of subsystems is recommended. OLI recommends the following guidelines for selecting redox subsystems:

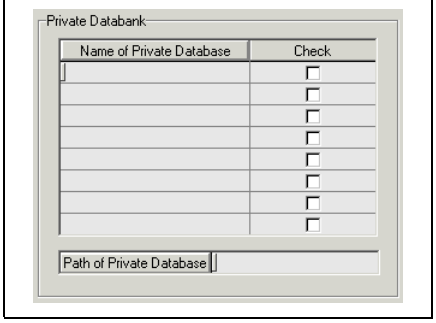
- If you are studying the corrosion of any metal, you have to include the redox subsystem corresponding to that metal. Most likely, REDOX will recommend to include that metal as a default.
- There is a large number of elements that usually occur in only one oxidation state. Metals of the first and second group in the periodic table (e.g., Na, K, Ca, etc.) are a good example. There is usually no need to include such metals in their elemental form.
- There are some non-metals that may or may be important in the redox equations. A typical example is sulfur. A typical example is sulfur. If you are studying, for example, corrosion of metals in H_2S-containing environments, it will be necessary to include the sulfur redox subsystem because H_2S may form sulfides, which commonly undergo redox transformations. However, if you are using H_2SO_4 only as an acid and do not anticipate any redox reactions, you do not have to select the sulfur redox subsystem.

1.8.4 Private User Databases - OLI Data Service

Refer to **Figure 1.13** in **Section 1.8 - HYSYS OLI Interface Component Databases** for more information on the OLI_Electrolyte Additional Database property view.

The HYSYS OLI Interface package allows you to provide additional databases via the Private Databank in the OLI_Electrolyte Additional Database property view. You can provide your own supplementary databases (Private Database) in addition to the Public (Limited, Full and Special) databases by specifying the path and name of the private database in the Path of Private Database field. After you have located the private database, it will be listed in the Private Database table (see **Figure 1.16**). You can select the desired private databases by selecting their corresponding checkboxes.

Figure 1.16



For more information on requesting private database services, consult the OLI Systems web site **www.olisystems.com**.

The private databases can be prepared by users with training but are normally produced by the OLI Data Service. The procedure for customizing databases is to inform OLI Systems that certain chemistry either is not covered or inadequately covered by the Full Database. OLI will then estimate the amount of time and provide quotations for the service. The fee is based upon whether or not OLI can provide public domain information and if OLI can release the results with subsequent releases of its Public Databanks. OLI's Data Service begins all projects with a thorough literature search. After all relevant literature is critically reviewed and the experimental data is fit, nonlinear regression is carried out. As a result of these regressions, databank coefficients are developed.

1.9 OLI Engine

The OLI Engine is the essential heart of all OLI software. The HYSYS OLI Interface package is an interface to the OLI Engine that enables simulations within HYSYS using the full functionality and capabilities of the OLI Engine for flowsheet simulation.

The OLI Engine is defined as the databanks and solvers that enable the prediction and numerical solution of the underlying chemical and physical equilibria. Therefore, the thermophysical properties and phase separations for almost any mixture of chemicals in water, at almost any conditions are of practical interest to industry. Refer to the OLI Engine manual for more information on OLI Engine Software. This can be obtained by contacting OLI Systems.

The flash conditions for standard HYSYS OLI Interface package include T = 0 to 300°C, P = 0 to 1,500 atm, Ionic Strength = 0 to 30 molal.

2 Examples of OLI Prediction

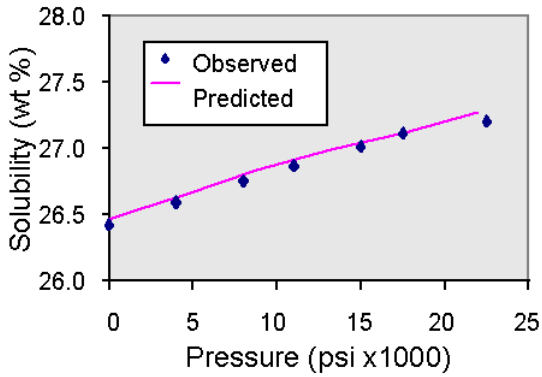
2.1 Solubility Prediction

Comparisons of OLI predicted and experimental results for electrolyte systems are provided in this chapter. The HYSYS OLI Interface package can indirectly predict the solubility from a stream flash in HYSYS.

2.1.1 Sodium Chloride Data

OLI's extensive database allows for prediction of virtually all important industrial solids. Below is a plot of the observed versus predicted solubility of NaCl over a broad range of pressures.

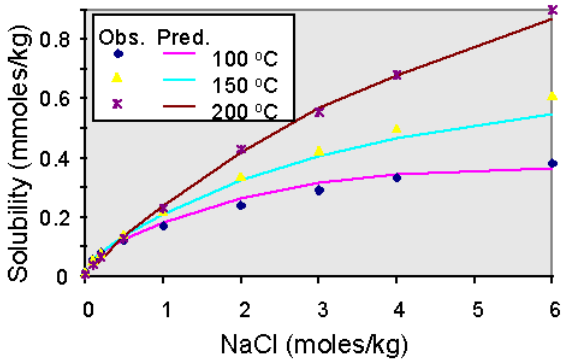
Figure 2.1



2.1.2 Barite Data

OLI Electrolytes accurately predicts the barite solubility over broad ranges of temperatures, pressures, and salinities as shown below.

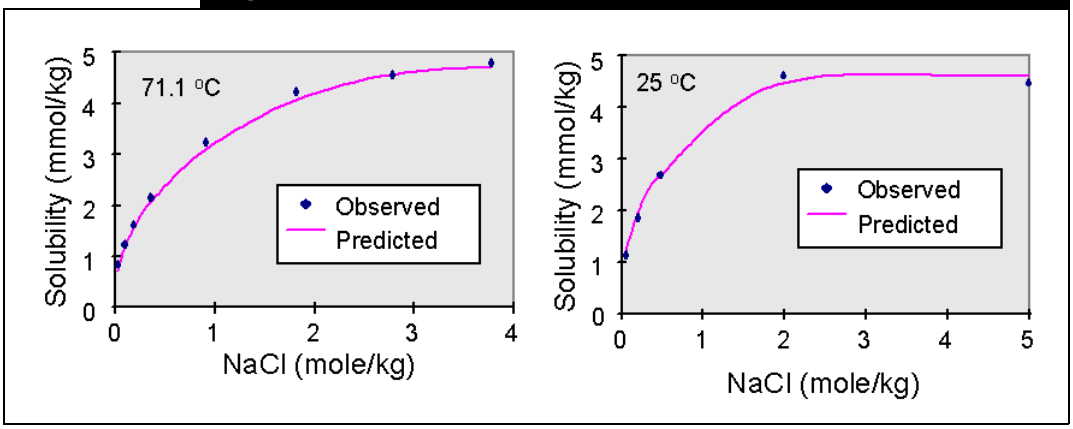
Figure 2.2



2.1.3 Celestite Data

Based upon quality fits, OLI Electrolytes software produces accurate predictions of strontium sulfate (celestite) solubility under a variety of conditions. In the two figures shown below, celestite solubility is predicted at two separate temperatures (25 and 71.1°C) over the solubility range of NaCl (0 to 6 molal).

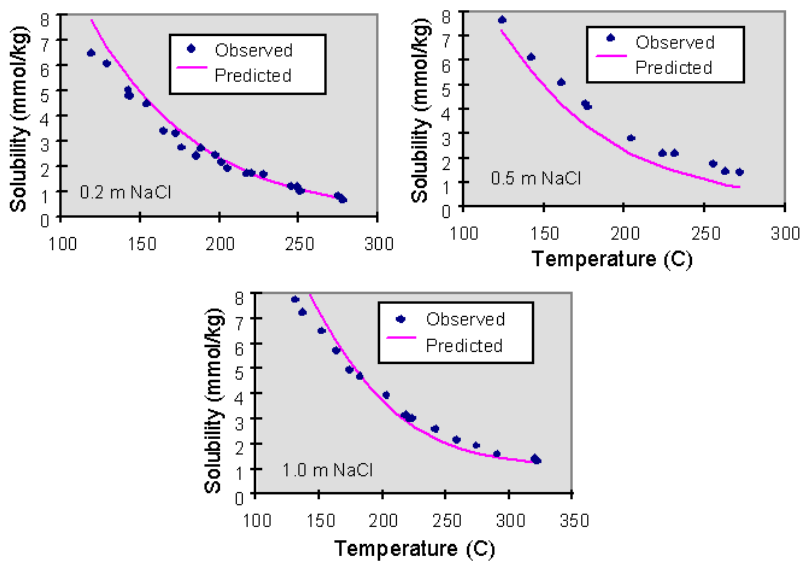
Figure 2.3



2.1.4 Celestite Solubility versus Temperature

The following graphs illustrate the experimental and predicted solubility of calcite at high temperatures, pressures, and NaCl concentrations. It can be seen that OLI accurately predicts calcite solubility over all conditions. This is due to the rigorous approach to computing the thermodynamic solubility of CaCO3, and the activity coefficients for the complete speciation of the ions in solution.

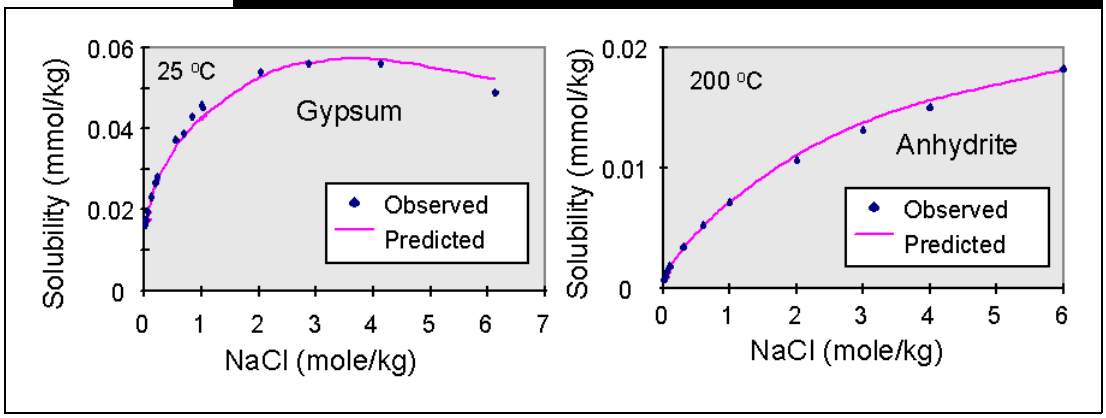
Figure 2.4



2.1.5 Gypsum & Anhydrite Data

OLI software produces accurate predictions of calcium sulfate solubility under a variety of conditions for the two major crystalline phases. In the two graphs shown below, gypsum (CaSO4.2H2O) and anhydrite (CaSO4) solubility is predicted over the NaCl range of 0 to 6 molal.

Figure 2.5



2.2 Speciation in Sour Water

This example is for a sour water system ($NH_3/H_2S/CO_2/H_2O$) with the following sour water species.

Sour Water Species	
Vapour Species	H_2O, CO_2, H_2S and NH_3
Aqueous Neutral Species	H_2O, CO_2, H_2S and NH_3
Aqueous Ionic Species	H^+, OH^-, NH_4^+, HS^-, S^{2-}, HCO_3^-, CO_3^{2-}, and $NH_2CO_2^-$

The chemistry can be summarized as:

Vapour - Liquid Equilibrium Reactions (Molecular Equilibrium)
$H_2O_{(vap)} = H_2O$
$NH_{3(vap)} = NH_{3(aq)}$
$CO_{2(vap)} = CO_{2(aq)}$
$H_2S_{(vap)} = H_2S_{(aq)}$

Aqueous Chemical Reactions (Electrolyte Equilibrium)*
$H_2O = H^+ + OH^-$
$NH_{3(aq)} + H_2O = NH_4^+$
$CO_{2(aq)} + H_2O = H^+ + HCO_3^-$
$HCO_3^- = H^+ + CO_3^{2-}$
$NH_2CO_2^- + H_2O_{(aq)} = NH_{3(aq)} + HCO_3^-$ (hydrolysis of ion)
$H_2S_{(aq)} = H^+ + HS^-$
$HS^- = H^+ + S^-$

*Note that additional electrolyte reactions are needed.

This example illustrates the importance of considering aqueous reactions and speciation, as well as the compliance of OLI predictions with experimental data.

The data contained in the table below compares the experimental partial pressures of carbon dioxide, ammonia and hydrogen sulfide against a VLE only model and the full OLI speciated model.

Figure 2.6

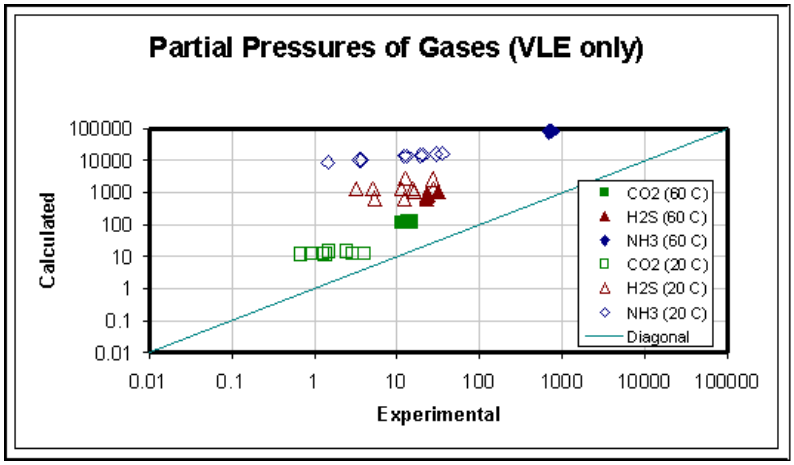
Temp (C)	Liquid Concentration (molality)			Partial Pressure (mmHg)								
				NH3			CO2			H2S		
	NH3	CO2	H2S	Exper.	OLI	VLE	Exper.	OLI	VLE	Exper.	OLI	VLE
	2.076	1.516	0.064	14.744	12.388	121.6	751.488	592.192	79594.8	31.616	36.936	1033.6
60	2.098	1.601	0.052	13.604	10.792	129.2	738.112	744.572	84762.8	23.256	35.112	843.6
	1.954	1.471	0.04	11.476	11.172	114	691.904	638.4	76820.8	22.8	25.004	638.4
	2.16	1.581	0.05	13.68	12.92	129.2	705.28	590.52	83524	22.42	28.12	813.2
	1.231	0.424	0.196	4.104	3.648	12.16	1.444	1.672	8580.4	3.192	3.04	1292
	1.236	0.507	0.201	2.888	2.66	12.16	3.496	3.42	10290.4	5.092	4.484	1325.44
	1.45	0.517	0.407	2.432	2.736	14.44	3.724	4.028	10526	12.54	10.944	2690.4
	1.439	0.665	0.396	1.52	1.444	14.44	13.072	13.148	13611.6	26.98	20.672	2634.16
20	1.132	0.681	0.1	1.368	1.216	11.4	12.16	13.984	13892.8	5.32	4.94	663.48
	1.234	0.694	0.199	1.292	1.216	12.16	13.072	16.036	14181.6	11.172	11.096	1322.4
	1.238	0.712	0.203	1.292	1.064	12.16	19	18.62	14561.6	15.276	12.464	1345.2
	1.234	0.725	0.199	0.912	0.988	12.16	20.444	20.672	14835.2	15.96	13.072	1079.2
	1.235	0.771	0.2	0.912	0.836	12.16	29.184	30.324	15808	27.36	17.024	1333.04
	1.126	0.794	0.095	0.684	0.684	11.4	35.188	36.252	16271.6	12.236	8.892	633.08

Table 1 - Comparing Experimental Partial Pressures to Calculated values.

The calculated partial pressures of the gases are over predicted as shown below in **Figure 2.7**. In the case of ammonia (filled and open diamonds), the over prediction may be as much as five orders of magnitude. If the OLI full speciation approach is not followed, this data can be improved with statistical corrections or by applying a strong activity model. However, the corrections may only work for the set of conditions specified here. If other conditions are desired, then the corrections will not be valid.

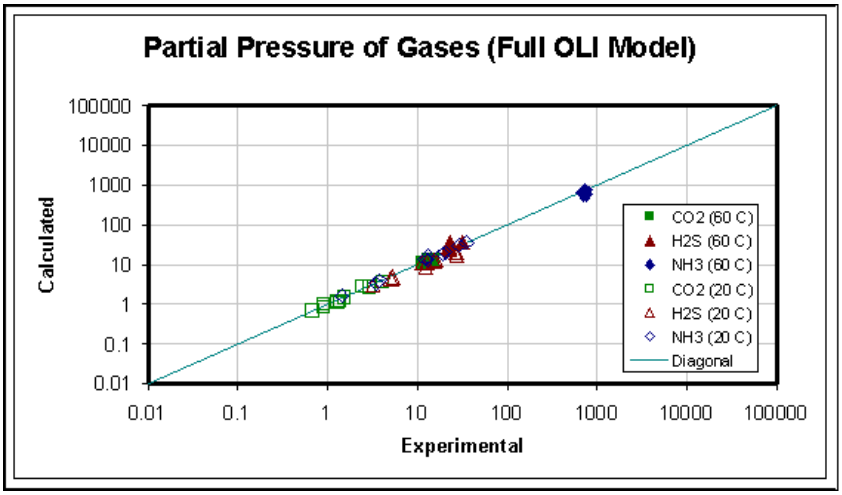
The OLI approach using full speciation is predictive over the entire range of OLI model conditions.

Figure 2.7



When all of the equilibria data is included (with aqueous reactions) in the calculations, the calculated partial pressure of the gases agrees with the experimental values shown in **Figure 2.8**. This is done without specialized data regression to the general range of this data. This provides confidence that the predictions will hold at other conditions.

Figure 2.8



3 Aqueous Thermodynamics

3.1 Thermodynamics Overview

Understanding aqueous thermodynamics is essential for the modeling of electrolytes. The HYSYS OLI Interface package is based on the OLI thermodynamic framework, which is briefly discussed in **Chapter 1 - HYSYS OLI Interface**. A thorough discussion of OLI's underlying aqueous thermodynamic framework is presented in this section.

OLI provides a complete speciation model for prediction of thermophysical properties of aqueous-based systems over a broad range of operating conditions. This includes principle thermodynamic properties, equations of state, excess properties, modern models, multi-phase models, limitations to the current HYSYS OLI Interface model, and scaling tendencies.

3.2 Equilibrium Constant

Refer to **Section 3.5 - Standard State** for the definition of standard state.

The evaluation of the following standard state equation is central to OLI software.

$$\Delta_R \overline{G}^\circ = -RT \ln \mathrm{K} \tag{3.1}$$

where:

$\Delta_R \overline{G}^\circ$ = *partial molal, standard-state Gibbs Free Energy of reaction. The subscript $_R$ refers to an equilibrium reaction, not gas constant*

R = Gas Constant (8.314 J/mole/K)

T = temperature (Kelvin)

K = equilibrium constant

The total free energy, $\Delta_R \overline{G}$, not just the standard state portion is defined as:

$$\Delta_R \overline{G} = \sum_i \nu_i \Delta_f \overline{G}_i(\text{Products}) - \sum_i \nu_i \Delta_f \overline{G}_i(\text{Reactants}) \quad (3.2)$$

where:

ν_i = *stoichiometric coefficient*

$\Delta_f \overline{G}_i$ = *Gibbs Free Energy of formation for a species i*

3.3 Principal Thermodynamic Properties

Aqueous thermodynamic properties are also discussed in **Section 1.3 - Gibbs Free Energy** with focus on the aqueous phase.

The following thermodynamic properties are composed of two parts:

- The standard state part that is only a function of temperature and pressure (denoted by the superscript °).
- The excess part that is a function of temperature, pressure, and concentration (denoted by the superscript ^{E}).

Partial Molal Gibbs Free Energy

$$\overline{G}_i = \overline{G}_i^\circ + \overline{G}_i^E \quad (3.3)$$

Partial Molal Enthalpy

$$\overline{H}_i = \overline{H}_i^\circ + \overline{H}_i^E \tag{3.4}$$

Partial Molal Entropy

$$\overline{S}_i = \overline{S}_i^\circ + \overline{S}_i^E \tag{3.5}$$

Partial Molal Heat Capacity

$$\overline{Cp}_i = \overline{Cp}_i^\circ + \overline{Cp}_i^E \tag{3.6}$$

Partial Molal Volume

$$\overline{V}_i = \overline{V}_i^\circ + \overline{V}_i^E \tag{3.7}$$

where:

^{0} = *standard state property*

^{E} = *excess property*

3.4 Helgeson-Kirkham-Flowers Equation of State

Helgeson, Kirkham, and Flowers (HKF)[1,2] have found that the standard state thermodynamic property of any species in water can be represented by a function with seven terms which have specific values for each species.

The seven terms (a1-4, c1-2, and ω) are integration constants for volume (a), heat capacity (c), and temperature and pressure properties of water (ω). They are independent of the data system used to obtain them and are shown below.

$$\begin{aligned}
\overline{H_i^\circ} &= \overline{H_i^R} + f_{Hi}(\text{a1},...,\text{a4},\text{c1},\text{c2},\omega) \\
\overline{G_i^\circ} &= \overline{G_i^R} + \overline{S_i^R}(T - T^R) + f_{Gi}(\text{a1},...,\text{a4},\text{c1},\text{c2},\omega) \\
\overline{S_i^\circ} &= \overline{S_i^R} + f_{Si}(\text{a1},...,\text{a4},\text{c1},\text{c2},\omega) \\
\overline{Cp_i^\circ} &= \overline{Cp_i^R} + f_{Cpi}(\text{a1},...,\text{a4},\text{c1},\text{c2},\omega) \\
\overline{V_i^\circ} &= \overline{V_i^R} + f_{Vi}(\text{a1},...,\text{a4},\text{c1},\text{c2},\omega)
\end{aligned} \tag{3.8}$$

where:

R = the reference state property (25°C, 1 bar)

° = standard state property

a1....a4 = the pressure effects

c1, c2 = the temperature effects

---

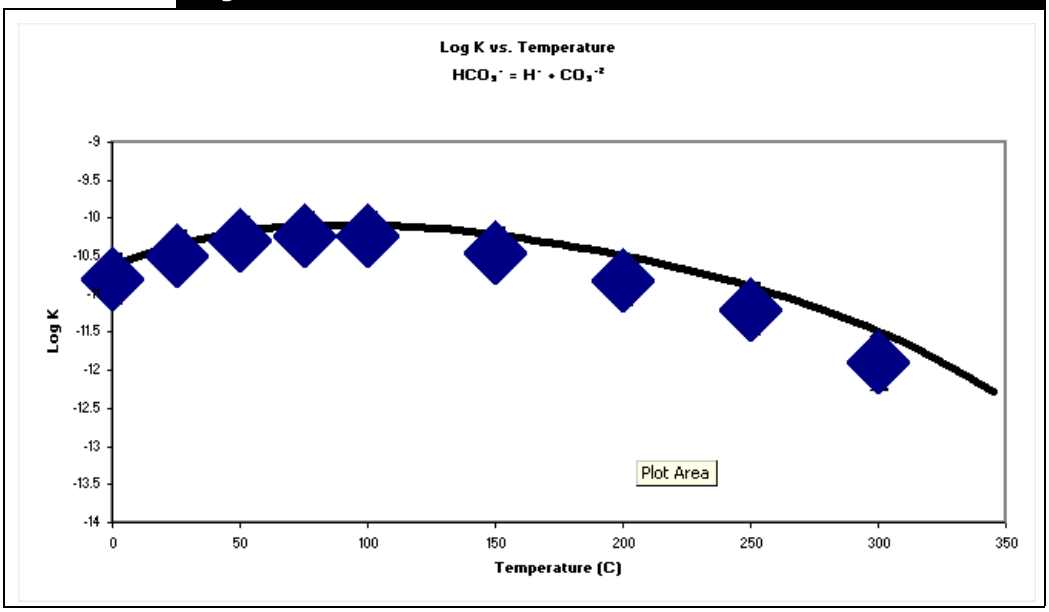
1. H.C. Helgeson, D.H. Kirkham, G.C. Flowers. Theoretical Prediction of the Thermodynamic Behavior of Aqueous Electrolytes at High Pressures and Temperatures - Parts I through IV. American Journal of Science 1974, 1976, 1981.
2. J.C. Tanger, IV Doctoral Thesis. 'Calculation of the Standard Partial Molal Thermodynamic Properties of Aqueous Ions and Electrolytes at High Pressures and Temperatures" University of California at Berkeley, 1986 H.C. Helgeson Advisor.

ω = *pressure and temperature effects*

The Helgeson equation of state parameters are used to predict equilibrium constants.

The logarithm of the equilibrium constant (LOG K) for the dissociation of the bicarbonate ion as a function of temperature at saturation pressure is shown in the following figure.

Figure 3.1



The symbols represent the data taken from the reference footnotes[1,2,3,4, 5], although the line was generated from the equation of state.

---

1. H.S. Harned and S.R. Scholes. The Ionization Constant of HCO3- from 0 to 50°. Journal of the American Chemical Society 63, 1706 (1941).
2. R. Nasanen. Zur Einwirkung der Saure und Basenzusatze auf die Fallungskurvevon Bariumcarbonate. Soumen Kemistilehti 90, 24 (1946).
3. F. Cuta and F. Strafelda. The second dissociation constant of carbonic acid between 60 and 90°C. Chem. Listy 48, 1308 (1954).
4. B.N. Ryzhenko. Geochemistry International 1, 8 (1963).
5. C.S. Patterson, G.H. Slocum, R.H. Busey, and R.E. Mesmer. Carbonate equilibrium in hydrothermal systems: First ionization of carbonic acid in NaCl media to 300°C. Geoch. Cosmoh. Acta 46, 1653 (1982).

3.4.1 The Helgeson Equation of State

Enthalpy

$$\begin{aligned}\overline{\Delta H^{\circ}_{P,\ T}} &= \Delta H^{\circ}_{f} + c_1(T - T_r) - c_2\left[\left(\frac{1}{T-\Theta}\right) - \left(\frac{1}{T_r-\Theta}\right)\right] + a_1(P - P_r) \\ &+ a_2 \ln\left(\frac{\Psi + P}{\Psi + P_r}\right) + \left(a_3(P - P_r) + a_4 \ln\left[\frac{\Psi + P}{\Psi + P_r}\right]\right)\left[\frac{2T-\Theta}{(T-\Theta)^2}\right] \\ &+ \omega\left(\frac{1}{\varepsilon} - 1\right) + \omega TY - T\left(\frac{1}{\varepsilon} - 1\right)\left(\frac{\partial \omega}{\partial T}\right)_P - \omega_{Pr,\ Tr}\left(\frac{1}{\varepsilon_{Pr,\ Tr}} - 1\right) \\ &- \omega_{Pr,\ Tr} T_r Y_r\end{aligned} \tag{3.9}$$

Gibbs Free Energy

$$\begin{aligned}\overline{\Delta G^{\circ}_{P,\ T}} &= \overline{\Delta G^{\circ}_{f}} - \overline{S^{\circ}_{Pr,\ Tr}}(T - T_r) - c_1\left[T \ln\left(\frac{T}{T_r}\right) - T + T_r\right] + a_1(P - P_r) \\ &+ a_2 \ln\left(\frac{\Psi + P}{\Psi + P_r}\right)\left(\frac{\Psi + P}{\Psi + P_r}\right) + \left[a_3(P - P_r) + a_4 \ln\left(\frac{\Psi + P}{\Psi + P_r}\right)\right]\left(\frac{1}{T-\Theta}\right) \\ &- c_2\left[\left(\left(\frac{1}{T-\Theta}\right) - \left(\frac{1}{T_r-\Theta}\right)\right)\left(\frac{\Theta - T}{\Theta}\right) - \frac{T}{\Theta^2}\ln\left(\frac{T_r(T-\Theta)}{T(T_r-\Theta)}\right)\right] + \omega\left(\frac{1}{\varepsilon} - 1\right) \\ &- \omega_{Pr,\ Tr}\left(\frac{1}{\varepsilon_{Pr,\ Tr}} - \quad\right) + \omega_{Pr,\ Tr} Y_{Pr,\ Tr}(T - T_r)\end{aligned} \tag{3.10}$$

Volume

$$\overline{V^{\circ}} = a_1 + a_2\left(\frac{1}{\Psi + P}\right) + \left[a_3 + a_4\left(\frac{1}{\Psi + P}\right)\right]\left(\frac{1}{T-\Theta}\right) - \omega Q + \left(\frac{1}{\varepsilon} - 1\right)\left(\frac{\partial \omega}{\partial P}\right)_T \tag{3.11}$$

Heat Capacity at Constant Pressure

$$\overline{Cp^{\circ}} = c_1 + c_2\left(\frac{1}{T-\Theta}\right)^2 - \left(\frac{2T}{(T-\Theta)^3}\right)\left[a_3(P-P_r) + a_4 \ln\left(\frac{\Psi+P}{\Psi+P_r}\right)\right] + \omega TX + 2TY\left(\frac{\partial\omega}{\partial T}\right)_P - T\left(\frac{1}{\varepsilon}-1\right)\left(\frac{\partial^2\omega}{\partial T^2}\right)_P \quad (3.12)$$

Entropy

$$\overline{S^{\circ}} = \overline{S^{\circ}_{Pr,Tr}} + c_1 \ln\frac{T}{T_t} - \frac{c_2}{\Theta}\left\{\left(\frac{1}{T-\Theta}\right) - \left(\frac{1}{T_r-\Theta}\right) + \frac{1}{\Theta}\ln\left(\frac{T_r(T-\Theta)}{T(T_r-\Theta)}\right)\right\} + \left(\frac{1}{T-\Theta}\right)^2\left[a_3(P-P_r) + a_4 \ln\left(\frac{\Psi+P}{\Psi+P_r}\right)\right] + \omega Y - \left(\frac{1}{\varepsilon}-1\right)\left(\frac{\partial\omega}{\partial T}\right)_P - \omega_{Pr,\ Tr} Y_{Pr,\ Tr} \quad (3.13)$$

where:

H = enthalpy

G = Gibbs free energy

V = volume

Cp = heat capacity at constant pressure

S = entropy

Θ *= 228 K*

Y = 2600 bar

w = temperature and pressure dependent term for the electrostatic nature of electrolytes

Q = pressure functions of the dielectric constant

e = dielectric constant of water

$a_1 ... a_4$ *= pressure dependent terms*

c_1, c_2 *= pressure dependent terms*

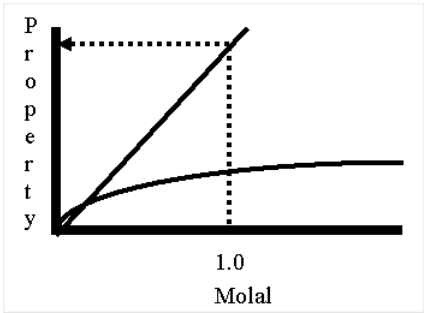
3.5 Standard State

The standard state refers to a thermodynamic value at a defined state (temperature, pressure, and concentration)[1].

3.5.1 Aqueous

The hypothetical 1.0 molal solution extrapolated from infinite dilution.

Figure 3.2



3.5.2 Vapour

The Ideal Gas Pure Component (mole fraction = 1.0).

3.5.3 Organic Liquid

The Ideal Gas Pure Component (mole fraction = 1.0).

1. M. Rafal, J.W. Berthold, N.C. Scrivner, and S.L. Grise. “Chapter 7: Models for Electrolyte Solutions”, Models for Thermodynamic and Phase Equilibria Calculations. Stanley I Sandler, Ed. Marcel-Dekker, Inc. New York: 1994. p. 686.

3.5.4 Solid

The pure component solid.

3.6 Excess Properties

Excess properties are a function of temperature, pressure and composition. With excess properties, the concept of activities and activity coefficients is introduced.

The excess property which is most important is the excess Gibbs free energy. An introduction to molal properties can be referred to in **Section 1.3 - Gibbs Free Energy**.

$$\overline{G_i^E} = RT \ln a_i \qquad a_i = \gamma_i m_i \tag{3.14}$$

This equation can be rewritten as:

$$\overline{G_i^E} = RT \ln a_i \tag{3.15}$$

Other excess properties involve various partial derivatives of γ_i with respect to temperature and/or pressure:

$$\overline{H_i^E} = RT^2 \frac{\delta \ln \gamma_i}{\delta T}\bigg|_P \tag{3.16}$$

3.6.1 Ionic Strength

The ionic strength is defined by the following equation:

$$I = \frac{1}{2} \sum_{i=1}^{nI} (z_i^2 m_i) \tag{3.17}$$

where:

nI = number of charged species

z_i = charge number of species

m_i = molality

3.6.2 Aqueous Activity Coefficients

The aqueous activity coefficient is represented by a long and short range definition as shown in the following equation.

$$\log \gamma_i = \text{Long range} + \text{Short range} \tag{3.18}$$

Long Range Term

Highly dilute solutions (e.g., 0.01 m NaCl). The ions are separated sufficiently such that the only interactions are between the ions and the solvent.

$$\ln \gamma_i = \frac{-z^2 A(T) \sqrt{I}}{1 + \mathring{A} B(T) \sqrt{I}} \tag{3.19}$$

where:

A° = ion size parameter

A(T), B(T) = Debye-Huckel parameters related to dielectric constant of water

At 25°C and 1 Atm[1]:

$A(T) = 0.5092\ kg^{0.5}/mole^{0.5}$

$B(T) = 0.3283\ kg^{0.5}/mole\text{-}cm\ X\ 10^{-8}$

Short Range Term

Increased concentrations in solution. The ions start to interact with each other (oppositely charged species attract, like charged species repel) in addition to the interactions with the solvent.

$$\sum_{j=1}^{n^\circ}(b_{ij}(T,\ I)m_j) \tag{3.20}$$

where:

n° = *number of oppositely charged species*

Modern Formulations

Bromley-Meissner: Semi-Correlative

The Bromley[1]-Meissner[2] equation can predict and extrapolate excess properties when data is limited or unavailable.

Bromley

$$\text{Log}\ \gamma_{\pm} = \frac{-A|Z_+Z_-|\sqrt{I}}{1+\sqrt{I}} + \frac{(0.06+0.6B)|Z_+Z_-|\sqrt{I}}{\left(1+\frac{1.5}{|Z_+Z_-|\sqrt{I}}\right)^2} + BI \tag{3.21}$$

where:

A = *Debye-Huckel constant*

1. H.C. Helgeson and D.H. Kirkham. American Journal of Science Vol. 274, 1199 (1974)
1. L.A. Bromley. Journal of Chemical Thermodynamics 4, 669 (1972)
2. H.P. Meissner. AIChE Symposium Ser. No. 173, 74, 124 (1978)

I = ionic strength

B = Bromley parameter

γ = *mean activity coefficient*

Z_+ = *charge of cation*

Z_- = *charge of anion*

Bromley-Zemaitis

Joseph Zemaitis extended the work of Bromley by adding two new terms to the Bromley-Zemaitis[1] activity model.

$$\text{Log } \gamma_{\pm} = \frac{-A|Z_+Z_-|\sqrt{I}}{1+\sqrt{I}} + \frac{(0.06+0.6B)|Z_+Z_-|\sqrt{I}}{\left(1+\frac{1.5}{|Z_+Z_-|\sqrt{I}}\right)^2} + BI + CI^2 + DI^3 \qquad (3.22)$$

Zemaitis added the C and D terms. Each of the B, C, and D terms have the following temperature (T in °C) functionality.

$$\begin{aligned} B &= B_1 + B_2T + B_3T^2 \\ C &= C_1 + C_2T + C_3T^2 \\ D &= D_1 + D_2T + D_3T^2 \end{aligned} \qquad (3.23)$$

1. Zemaitis, J.F., Jr., D.M. Clark, M. Rafal, and N.C. Scrivner, Handbook of Aqueous Electrolyte Thermodynamics, American Institute of Chemical Engineers, New York, 1986.

Pitzer: Highly Interpolative

The Pitzer[1] equation is somewhat dependent on the model. When using large amount of published data, considerable caution is required to verify the employed standard state model.

$$\text{Log } \gamma_{\pm} = |Z_+ Z_-| f^{\gamma} + m\left(\frac{2(v_+ v_-)}{v}\right) B_{\pm}^{\gamma} + m^2\left(\frac{2(v_+ v_-)^{1.5}}{v}\right) C_{\pm}^{\gamma} \qquad (3.24)$$

where:

f^{γ} = *Debye-Huckel term*[2]

v_+ = *stoichiometric coefficient for the cation*

v_- = *stoichiometric coefficient for the anion*

$v = v_+ + v_-$

m = *concentration (molal)*

$B_{\pm}^{\gamma}$ = *Pitzer B term that contains adjustable parameters*

$C_{\pm}^{\gamma}$ = *Pitzer V term that contains adjustable parameters*

Helgeson: Limited in Scope

$$\text{Log } \overline{\gamma_{\pm}} = \frac{-A_{\gamma}|Z_i Z_l|\sqrt{I}}{1 + a_0 B_{\gamma}\sqrt{I}} + \Gamma_{\gamma} + \left(\frac{\omega_k}{v_k} \sum_k b_k Y_k I + \frac{\frac{v_{i,\,k}}{v_k} \sum_l b_{il} \overline{Y}_l \sqrt{I}}{\Psi_l} + \frac{v_{l,\,k}}{v_k} \sum_i \frac{b_{il} \overline{Y}_i \sqrt{I}}{\Psi_i} \right) \qquad (3.25)$$

where:

A_{γ} = *Debye-Huckel constant according to Helgeson*[3]

Z_i = *charge on cation*

Z_l = *charge on anion*

1. K.S. Pitzer, et al. Journal of Soln. Chem 4, 249 (1975); Journal of Phys Chem. 81, 1872 (1977); Journal of Soln. Chem. 7, 327(1978); Journal of the American Chemical Society 96, 5701 (1974)
2. IBID, p 74
3. H.C. Helgeson, D.H. Kirkham, and G.C. Flowers. American Journal of Science. 281, 1249 (1981)

a_o = *ion size parameter*

B_γ = *extended Debye-Huckel term according to Helgeson*

I = *true ionic strength which includes the effects of complexation*

Γ_γ = *conversion of molal activity to mole fraction activity*

ω_k = *electrostatic effects on the solvent due to the species k*

ν_k = *moles of electrolyte (summation)*

$\nu_{i,k}$ = *moles of cation per mole of electrolyte*

$\nu_{l,k}$ = *moles of anion per mole of electrolyte*

$b_{i,l}$ = *adjustable parameter for the ion-ion interaction*

Y_i = *fraction of ionic strength on a true basis attributed to the cation*

Y_l = *fraction of ionic strength on a true basis attributed to the anion*

Ψ_i = *½(half) the cation charge*

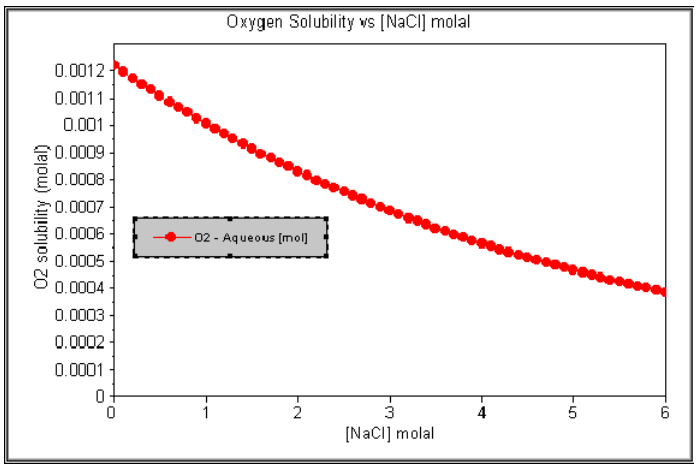
Ψ_l = *½(half) the anion charge*

Neutral Species

Neutral molecules in water are affected by other species in a solution. The salting in and out of a gas is a typical example. When oxygen is dissolved in pure water, it has a typical solubility. When salt is added, the oxygen solubility decreases. This is most likely due to interactions of sodium and chloride ions reacting with the neutral oxygen molecule.

The solubility of oxygen in NaCl solutions at 25°C and 1 atm is shown in the figure below.

Figure 3.3



Setschenow

This phenomenon known as salting in/out is characterized by the Setschenow[1] equation. The formulation is in terms of the ratio of solubilities in pure water to an aqueous salt solution at a constant temperature.

$$\text{Ln}\ \gamma_{aq} = \frac{S_o}{S_s} = Km_s \qquad (3.26)$$

where:

S_o = *solubility of gas in pure water*

S_s = *solubility of gas in a salt solution*

K = *Setschenow coefficient*

m_s = *concentration of the salt*

In this case, the K is approximately equal to -0.0002. It should be noted that this approach is limited to a single temperature.

1. J. Setschenow, Z. Physik. Chem., 4, 117 (1889)

Pitzer

The Pitzer[1] formulation is a more rigorous approach than the Setschenow equation. The effects of temperature and composition can be modeled.

$$\text{Ln}\,\gamma_{aq} = 2\beta_{0(m-m)}m_m + 2\beta_{0(m-s)}m_s \qquad (3.27)$$

where:

$\beta_{0(m-m)}$ = *adjustable parameter for molecule-molecule interactions. (A function of temperature)*

$\beta_{0(m-s)}$ = *adjustable parameter for molecule-ion interactions. (A function of temperature)*

m_s = *concentration of neutral species*

3.7 Multi-phase Model

The thermodynamic multiple physical phases in equilibrium with the aqueous phase are discussed in this section. The model will correctly predict precipitating solids, formation of a gas phase and a second (non-aqueous) liquid phase. Refer to **Section 1.5 - Other Physical Phases in Equilibrium** for more information on physical phases in equilibrium with the aqueous phase.

1. K.S. Pitzer, et al. Journal of Soln. Chem 4, 249 (1975); Journal of Phys. Chem. 81, 1872 (1977); Journal of Soln. Chem. 7, 327 (1978); Journal of Am. Chem. Soc. 96, 5701 (1974)

3.7.1 Solid-Aqueous Equilibrium

The general solid-aqueous equilibrium form is characterized below.

$$S_i = p_1 P_1 + p_2 P_2 + \ldots + p_p P_p \tag{3.28}$$

Examples of solid-aqueous reactions include:

$$NaCl_{(cr)} = Na^{+}_{(aq)} + Cl^{-}{}_{aq)}$$

$$CaSO_4 \cdot 2H_2O = Ca^{2+}{}_{(aq)} + SO_{4(aq)}^{2-} + 2H_2O$$

3.7.2 Solid Phase Thermodynamic Properties

Solids in equilibrium with the aqueous phase are independent phases. Thus, the Gibbs free energy is calculated for individual solids and is represented by the classical thermodynamic equation.

$$\overline{G}_{Si} = \overline{G}^R_{Si} + \overline{S}^R_{Si}(T - T^R) + \int_{T^R}^{T}\int_{T^R}^{T}\left(\frac{Cp}{T}dT\right)dT + \int_{P^R}^{P} VdP$$

$$Cp = a_1 + a_2 T + a_3 T^{-2} \tag{3.29}$$

$$V = b_1$$

$$Log_{10}K_{sp}(T,\ P) = A + \frac{B}{T_K} + CT_K + DT_K^2 + E + FP + GP^2$$

The compressibility of the solid remains constant ($V = b_1$) when simulated under normal conditions.

3.7.3 Mixed EOS Model

In addition to solids, HYSYS OLI Interface accounts for the possible formation of a gas and a second (non-aqueous) phase. The following thermodynamic equations are applied to the gas and liquid phases based on the enhanced SRK formulation.

Vapour-Aqueous Phase

The gas or vapour-aqueous phase is represented by the general thermodynamic equation.

$$\overline{G_{Vi}} = \overline{G_{Aqi}}$$

$$\overline{G^o_{Vi}} + RT\ln(\phi_{Vi} y_i P) = \overline{G^o_{Aqi}} + RT\ln(\gamma_i m_i)$$

$$a_{Aqi} = \gamma_i m_i$$

$$f_{vi} = \phi_{Vi} y_i P \qquad (3.30)$$

The reference state for the vapor is the ideal gas

$$\overline{G^o_{Vi}} + RT\ln(f_{Vi}) = \overline{G^o_{Aqi}} + RT\ln(a_{Aqi})$$

$$K = EXP\left[\frac{G^o_{Aqi} - G^o_{Vi}}{RT}\right] = \frac{a_{Aqi}}{f_{Vi}}$$

Non-Aqueous Liquid-Aqueous Phase

The non-aqueous second liquid phase is represented by the following thermodynamic equation.

$$\overline{G_{Li}} = \overline{G_{Aqi}}$$

The reference state for the non-aqueous liquid is the ideal gas vapor

$$\begin{aligned} \overline{G^o_{Vi}} + RT\ln(\phi_{Li} y_i P) &= \overline{G^o_{Aqi}} + RT\ln(\gamma_i m_i) \\ a_{Aqi} &= \gamma_i m_i \\ f_{Li} &= \phi_{Li} y_i P \end{aligned} \qquad (3.31)$$

$$\overline{G^o_{Vi}} + RT\ln(f_{Li}) = \overline{G^o_{Aqi}} + RT\ln(a_{Aqi})$$

$$K = EXP\left[\frac{G^o_{Aqi} - G^o_{Li}}{RT}\right] = \frac{a_{Aqi}}{f_{Li}}$$

3.8 Scaling Tendencies

The scaling tendency is the ratio of the real-solution solubility product to the thermodynamic limit based on the thermodynamic equilibrium constant.

For Example, consider the following dissolution:

$$\mathrm{NaHCO_{3(s)}} = Na^+ + HCO_3^-$$

The ion activity product (IAP) is defined as the product of specific ions. In this case that would be the ions that result from the dissociation of a particular solid. For this example, a 1.0 molal NaHCO3 solution is considered.

$$\mathrm{IAP} = \gamma_{Na} m_{Na} \gamma_{HCO_3} m_{HCO_3}$$

Assuming Ideal solution activities:

$$\gamma_{Na} = 1.0 \qquad \gamma_{HCO_3} = 1.0$$
$$m_{Na} = 1.0 \qquad m_{HCO_3} = 1.0$$

$$\text{IAP} = (1.0)(1.0)(1.0)(1.0) = 1.0$$

The solubility product (K_{sp}) is the thermodynamic limit of ion availability.

$$K_{sp} = [Na^+][\text{HCO}^-]^3$$
$$K_{sp} = 0.403780$$

The scaling tendency is then the ratio of available ions to the thermodynamic limit.

$$ST = \frac{IAP}{K_{sp}}$$
$$ST = \frac{1.0}{0.403780} = 2.48$$

The above scaling factor is based on assuming ideal conditions. The actual species concentration and activity coefficients are:

$$\text{IAP} = (0.598)(0.894)(0.596)(0.866) = 0.276$$

$$\gamma_{Na} = 0.598 \qquad \gamma_{HCO_3} = 0.596$$
$$m_{Na} = 0.894 \qquad m_{HCO_3} = 0.866$$

Therefore, the new scaling tendency is:

$$ST = \frac{IAP}{K_{sp}}$$
$$ST = \frac{0.276}{0.403780} = 0.683$$

The concentrations are not equal to 1.0. This is due to speciation and the chemical equilibria which tend to form complexes that provide a "sink" for carbonate species. For this example, the concentrations (molal) are:

$$CO_2^{\,o} = 0.016 \qquad NaHCO_3^{\,o} = 0.101$$
$$CO_3^{\,2-} = 0.012 \qquad NaCO_3^{\,-} = 0.004$$

The scaling tendencies represent the following:

- If ST < 1, then the solid is under-saturated
- If ST > 1, then the solid is super-saturated
- If ST = 1, then the solid is at saturation
- Scaling Index = Log (ST)

TRANGE

TRANGE is the nomenclature for solids that have been fit to a polynomial form rather than pure thermodynamics. The polynomial has the following functional form:

$$\text{Log } K = A + B/T + CT + DT^2 \tag{3.32}$$

It is known that extrapolating polynomials is inaccurate and may lead to incorrect predictions of the scaling tendency. Therefore, the applicable range is generally limited to data set.

Consider the following example for a four solid system.

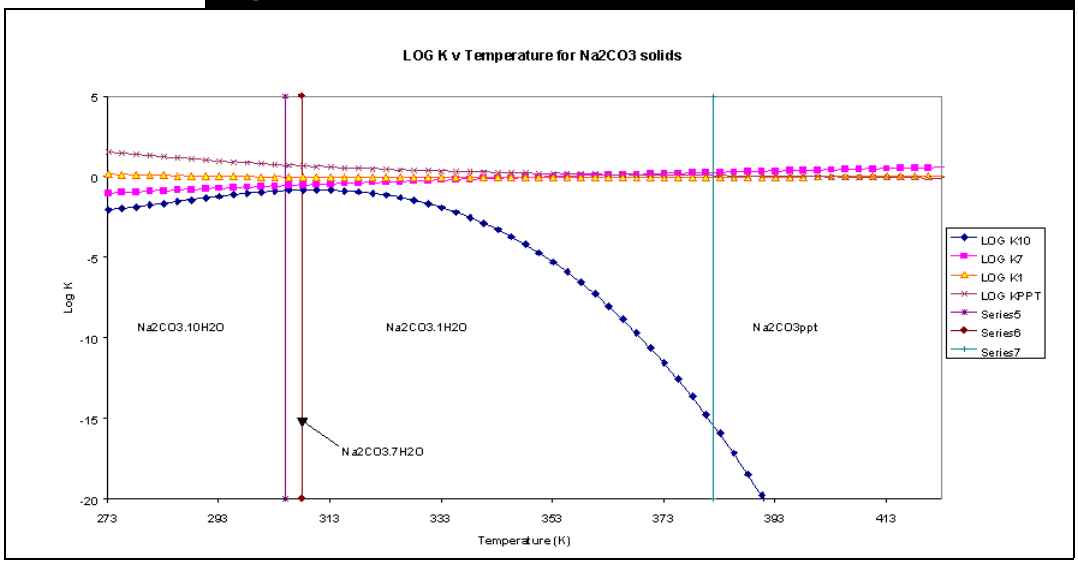
Solid	Temperature Range (°C)
$Na_2CO_3 \cdot 10H_2O$	0 - 35
$Na_2CO_3 \cdot 7H_2O$	35 - 37
$Na_2CO_3 \cdot 1H_2O$	37 - 109
Na_2CO_3	109 - 350

The table above indicates that the solids change their form as the temperature is increased.

Each solid is fit to the above polynomial. There may be problems if the extrapolated values from higher number hydrates extend to the regions where the lower number hydrates are stable.

Notice that the deca-hydrate species does not extrapolate smoothly to high temperatures as shown below.

Figure 3.4



At 350 K, it can be seen that if the solid is included in the model, the equilibrium based solver would attempt to include it over the actual solid, which is the monohydrate.

Since the decahydrate species is outside the temperature range, it is mathematically eliminated from the equations.

A HYSYS OLI Interface Full Database

A.1 List of Full HYSYS OLI Interface Database

Currently, HYSYS only supplies the HYSYS OLI Interface Name column for component databases.

The full database covers thousands of species in water. In terms of inorganic chemistry this includes much of the aqueous chemistry including speciation reactions for 79 elements in water from the Periodic Table. In addition, thousands of organic chemical compounds (electrolyte and non-electrolyte) are covered. The following list includes the HYSYS OLI Interface Name, Formula and the Common/IUPAC name. To find or match an electrolyte component in HYSYS, select the appropriate component or type in the HYSYS OLI Interface name.

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
(C2H5)4N+1	Tetraethylammonium ion(+1)	ET4NION
(C2H5)4NBr	Tetraethylammonium bromide	ET4NBR
(C2H5)4NCl	Tetraethylammonium chloride	ET4NCL
(C2H5)4NClO4	Tetraethylammonium perchlorate	ET4NCLO4
(C2H5)4NI	Tetraethylammonium iodide	ET4NI
(C3H7)4N+1	Tetrapropylammonium ion(+1)	PR4NION
(C3H7)4NBr	Tetrapropylammonium bromide	PR4NBR
(C3H7)4NCl	Tetrapropylammonium chloride	PR4NCL
(C3H7)4NI	Tetrapropylammonium iodide	PR4NI
(C4H9)3PO4	Tri-n-butylphosphate	TRIBUTPHOS
(C4H9)4N+1	Tetrabutylammonium ion(+1)	BU4NION
(C4H9)4NBr	Tetrabutylammonium bromide	BU4NBR
(C4H9)4NCl	Tetrabutylammonium chloride	BU4NCL
(C4H9)4NI	Tetrabutylammonium iodide	BU4NI
(C5H11)4N+1	Tetraamylammonium ion	AM4NION
(C5H11)4NBr	Tetrapentylammonium bromide	AM4NBR
(C5H11)4NCl	Tetrapentylammonium chloride	AM4NCL
(C5H11)4NI	Tetrapentylammonium iodide	AM4NI
(C6H13)4N+1	Tetrahexylammonium ion(+1)	HX4NION
(C6H13)4NBr	Tetrahexylammonium bromide	HX4NBR
(C6H13)4NCl	Tetrahexylammonium chloride	HX4NCL
(C6H13)4NI	Tetrahexylammonium iodide	HX4NI
(CaHCO3)2CO3	Di(calcium bicarbonate) carbonate	CAHCO32CO3
(CaHCO3)2SO4	Di(calcium bicarbonate) sulfate	CAHCO32SO4

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
(CH3)4N+1	Tetramethylammonium ion(+1)	ME4NION
(CH3)4NBr	Tetramethylammonium bromide	ME4NBR
(CH3)4NCl	Tetramethylammonium chloride	ME4NCL
(CH3)4NClO4	Tetramethylammonium perchlorate	ME4NCLO4
(CH3)4NF	Tetramethylammonium fluoride	ME4NF
(CH3)4NI	Tetramethylammonium iodide	ME4NI
(CH3)4NNO3	Tetramethylammonium nitrate	ME4NNO3
(COOH)2.2H2O	Oxalic acid dihydrate	OXALAC.2H2O
(HF)2	Hydrofluoride, dimer	H2F2
(HF)6	Hydrogen fluoride, hexamer	H6F6
(MgCl)2CO3	Di(magnesium chloride) carbonate	MGCL2CO3
(MgCl)2SO4	Di(magnesium chloride) sulfate	MGCL2SO4
(MgHCO3)2CO3	Di(magnesium bicarbonate) carbonate	MGHCO32CO3
(MgHCO3)2SO4	Di(magnesium bicarbonate) sulfate(VI)	MGHCO32SO4
(NH4)2C2O4	Ammonium oxalate	NH42OX
(NH4)2C2O4.1H2O	Ammonium oxalate monohydrate	NH42OX.1H2O
(NH4)2CO3	Ammonium carbonate	NH42CO3
(NH4)2CO3.2NH4HCO3	Ammonium sesquicarbonate	NH44H2CO33
(NH4)2HPO4	Ammonium hydrogen orthophosphate	NH42HPO4
(NH4)2HPO4.2H2O	Ammonium hydrogen orthophosphate dihydrate	NH42HPO4.2H2O
(NH4)2S	Ammonium sulfide	NH42S
(NH4)2S5	Ammonium pentasulfide	NH42S5
(NH4)2SiF6	Ammonium hexafluorosilicate	NH42SIF6
(NH4)2SO3	Ammonium sulfite	NH42SO3
(NH4)2SO3.1H2O	Ammonium sulfite monohydrate	NH42SO3.1H2O
(NH4)2SO4	Ammonium sulfate	NH42SO4
(NH4)3PO4	Ammonium orthophosphate	NH43PO4
(NH4)3PO4.3H2O	Ammonium phosphate trihydrate	NH43PO4.3H2O
(NpO2)2(OH)2+2	Di(dioxoneptunium(VI)) dihydroxide ion(+2)	NPO22OH2ION
(NpO2)2C2O4	Dioxoneptunium(V) oxalate	NPVO22C2O4
(NpO2)3(OH)5+1	Tri(dioxoneptunium(VI)) pentahydroxide ion(+1)	NPO23OH5ION
(P2O5)2	Phosphorus pentoxide	P4O10
(PuO2)2(OH)2+2	Di(dioxyplutonium(VI)) dihydroxide ion(+2)	PUO22OH2ION
(PuO2)2C2O4	Di(dioxyplutonium(V)) oxalate	PUVO22C2O4
(PuO2)3(OH)5+1	Tri(dioxyplutonium(VI)) pentahydroxide ion(+1)	PUO23OH5ION
(TcO(OH)2)2	Oxytechnetium(IV) dihydroxide, dimer	TCIVOOH22

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
(UO2)(ASO4)2	Uranyl(VI) arsenate	UO23ASO42
(UO2)2(OH)2+2	Diuranyl(VI) dihydroxide ion(+2)	UO22OH2ION
(UO2)2[C10H12N2O8]	Diuranyl(VI) EDTA	UO22EDTA
(UO2)2[C6H5O7]2-2	Diuranyl(VI) ditartrate ion(-2)	UO22CTRT2ION
(UO2)2Cl3	Uranyl(VI) uranyl(V) chloride	UO22CL3
(UO2)2P2O7	Uranyl(VI) pyrophosphate	UO22P2O7
(UO2)3(OH)5+1	Triuranyl(VI) pentahydroxide ion(+1)	UO23OH5ION
(UO2)3(PO4)2	Uranyl(VI) orthophosphate	UO23PO42
(UO2)3(PO4)2.4H2O	Uranyl(VI) orthophosphate tetrahydrate	UO23PO42.4H2O
[Pt(NH3)6](OH)4	Platinum(IV) hexaammonia tetrahydroxide	PTIVNH36OH4
[Pt(NH3)6]Cl4	Platinum(IV) hexaammonia tetrachloride	PTNH36CL4
2Na2SO4.Na2CO3	Hexasodium carbonate bissulfate	NA6SO42CO3
Ag	Silver	AGEL
Ag(C2O4)-1	Silver oxalate ion(-1)	AGC2O4ION
Ag(CN)2-1	Silver dicyanide ion(-1)	AGCN2ION
Ag(CN)3-2	Silver tricyanide ion(-2)	AGCN3ION
Ag(NH3)2+1	Silver diammonia ion(+1)	AGNH32ION
Ag(NO2)2-1	Silver dinitrite ion(-1)	AGNO22ION
Ag(OH)2-1	Silver dihydroxide ion(-1)	AGOH2ION
Ag(SCN)2-1	Silver dithiocyanate ion(-1)	AGSCN2ION
Ag(SCN)3-2	Silver trithiocyanate ion(-2)	AGSCN3ION
Ag(SCN)4-3	Silver tetrathiocyanate ion(-3)	AGSCN4ION
Ag[C10H12N2O8]-3	Silver EDTA ion(-3)	AGEDTAION
Ag[C14H18N3O10]-4	Silver DTPA ion(-4)	AGDTPAION
Ag[C2H3O2]	Silver(I) acetate	AGACET
Ag[C2H3O2]2-1	Silver diacetate ion(-1)	AGACET2ION
Ag[C2H3O3]	Silver glycolate	AGGLYCOL
Ag[C2H3O3]2-1	Silver diglycolate ion(-1)	AGGLYCOL2ION
Ag[C2H7NO]+1	Silver mono(2-aminoethanol) ion(+1)	AGMEXHION
Ag[C2H7NO]2+1	Silver di(2-aminoethanol) ion(+1)	AGMEXH2ION
Ag[C2H8N2]+1	Silver monoethylenediamine ion(+1)	AGEDAION
Ag[C2H8N2]2+1	Silver diethylenediamine ion(+1)	AGEDA2ION
Ag[C4H11NO2]+1	Silver mono(N,N-diethanolamine) ion(+1)	AGDEXHION
Ag[C4H11NO2]2+1	Silver di(N,N-diethanolamine) ion(+1)	AGDEXH2ION
Ag[C6H15NO3]+1	Silver monotriethanolamine ion(+1)	AGTEXHION
Ag[C6H15NO3]2+1	Silver di(triethanolamine) ion(+1)	AGTEXH2ION
Ag[C6H6NO6]-2	Silver NTA ion(-2)	AGNTAION
Ag[H2C6H6NO6]	Silver dihydrogen NTA	AGH2NTA

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ag[H3C10H12N2O8]	Silver trihydrogen EDTA	AGH3EDTA
Ag[H4C14H22N3O10]	Silver tetrahydrogen DTPA	AGH4DTPA
Ag[HC10H13N2O8]-2	Silver hydrogen EDTA ion(-2)	AGHEDTAION
Ag[HC2H8N2]+2	Silver hydrogen ethylenediamine ion(+2)	AGHEDAION
Ag+1	Silver ion(+1)	AGION
Ag2[C2H8N2]2+2	Disilver diethylenediamine ion(+2)	AG2EDA2ION
Ag2C2O4	Silver(I) oxalate	AG2C2O4
Ag2CO3	Silver(I) carbonate	AG2CO3
Ag2MoO4	Disilver molybdenum tetraoxide	AG2MOO4
Ag2O	Silver(I) oxide	AG2O
Ag2S	Silver(I) sulfide	AG2S
Ag2Se	Silver(I) selenide	AG2SE
Ag2SeO3	Disilver selenium trioxide	AG2SEO3
Ag2SeO4	Disilver selenium tetraoxide	AG2SEO4
Ag2SO4	Silver(I) sulfate	AG2SO4
Ag2WO4	Disilver tungsten tetraoxide	AG2WO4
Ag3AsO4	Trisilver arsenium tetraoxide	AG3ASO4
Ag3PO4	Silver(I) phosphate	AG3PO4
AgBr	Silver(I) bromide	AGBR
AgBr2-1	Silver dibromide ion(-1)	AGBR2ION
AgBr3-2	Silver tribromide ion(-2)	AGBR3ION
AgBr4-3	Silver tetrabromide ion(-3)	AGBR4ION
AgCl	Silver chloride	AGCL
AgCl2-1	Silver dichloride ion(-1)	AGCL2ION
AgCl3-2	Silver trichloride ion(-2)	AGCL3ION
AgCl4-3	Silver tetrachloride ion(-3)	AGCL4ION
AgCN	Silver cyanide	AGCN
AgF	Silver(I) fluoride	AGF
AgF.2H2O	Silver(I) fluoride dihydrate	AGF.2H2O
AgF.4H2O	Silver(I) fluoride tetrahydrate	AGF.4H2O
AgI	Silver iodide	AGI
AgI2-1	Silver diiodide ion(-1)	AGI2ION
AgI3-2	Silver triiodide ion(-2)	AGI3ION
AgI4-3	Silver tetraiodide ion(-3)	AGI4ION
AgNO2	Silver nitrite	AGNO2
AgNO3	Silver nitrate	AGNO3
AgOH	Silver hydroxide	AGOH
AgSCN	Silver thiocyanate	AGSCN
AgSO4-1	Silver sulfate ion(-1)	AGSO4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Al	Aluminum	ALEL
Al(NO2)3	Aluminum nitrite	ALNO23
Al(NO3)3	Aluminum nitrate	ALNO33
AL(NO3)3.6H2O	Aluminum nitrate hexahydrate	ALNO33.6H2O
Al(NO3)3.8H2O	Aluminum nitrate octahydrate	ALNO33.8H2O
Al(NO3)3.9H2O	Aluminum nitrate nonahydrate	ALNO33.9H2O
Al(OH)2+1	Aluminum dihydroxide ion(+1)	ALOH2ION
Al(OH)3	Aluminum hydroxide	ALOH3
Al(OH)4-1	Aluminum tetrahydroxide ion(-1)	ALOH4ION
Al(SO4)2-1	Aluminum disulfate ion(-1)	ALSO42ION
Al[C10H12N2O8]-1	Aluminum EDTA ion(-1)	ALEDTAION
Al[C14H18N3O10]-2	Aluminum DTPA ion(-2)	ALDTPAION
Al[C2H3O2]+2	Aluminum monoacetate ion(+2)	ALACETION
Al[C2H3O2]2+1	Aluminum diacetate ion(+1)	ALACET2ION
Al[C2H3O2]3	Aluminum acetate	ALACET3
Al[H2C14H18N3O10]	Aluminum dihydrogen DTPA	ALH2DTPA
Al[HC10H12N2O8]	Aluminum hydrogen EDTA	ALHEDTA
Al[HC14H18N3O10]-1	Aluminum hydrogen DTPA ion(-1)	ALHDTPAION
Al+3	Aluminum ion(+3)	ALION
Al2(SO4)3	Aluminum sulfate	AL2SO43
Al2(SO4)3.16H2O	Aluminum sulfate hexadecahydrate	AL2SO43.16H2O
Al2(SO4)3.6H2O	Aluminum sulfate hexahydrate	AL2SO43.6H2O
Al2Mn3O12Si3	Dialuminum trimanganese trisilicon dodecaoxide	MN3AL2SI3O
Al2S3	Aluminum sulfide	AL2S3
Al2Si2O5(OH)4	Halloysite	HALLOYSITE
Al2SiO5(OH)4	Dialuminum silicon pentaoxide tetrahydroxide	DICKITE
Al4Fe5Si6O22(OH)2	Tetraaluminum pentairon hexasilicon docosaoxide dihydroxide	FERROGDRIT
AlBr3	Aluminum bromide	ALBR3
AlCl3	Aluminum chloride	ALCL3
AlCl3.6H2O	Aluminum chloride hexahydrate	ALCL3.6H2O
AlF+2	Aluminum monofluoride ion(+2)	ALFION
AlF2+1	Aluminum difluoride ion(+1)	ALF2ION
AlF3	Aluminum fluoride	ALF3
AlF3.3H2O	Aluminum fluoride trihydrate	ALF3.3H2O
AlF4-1	Aluminum tetrafluoride ion(-1)	ALF4ION
AlF5-2	Aluminum pentafluoride ion(-2)	ALF5ION
AlF6-3	Aluminum hexafluoride ion(-3)	ALF6ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
AlI3	Aluminum iodide	ALI3
AlO(OH)	Aluminum oxide hydroxide	ALOOH
AlOH+2	Aluminum monohydroxide ion(+2)	ALOHION
AlPO4	Aluminum phosphate	ALPO4
AlSO4+1	Aluminum monosulfate ion(+1)	ALSO4ION
Am(C2O4)2-1	Americium(III) dioxalate ion(-1)	AMIIIC2O42ION
Am(C2O4)3-3	Americium(III) trioxalate ion(-3)	AMIIIC2O43ION
Am(CO3)2-1	Americium(III) dicarbonate ion(-1)	AMCO32ION
Am(HCO3)2+1	Americium(III) di(bicarbonate) ion(+1)	AMHCO32ION
Am(NO3)2+1	Americium(III) dinitrate ion(+1)	AMNO32ION
Am(NO3)3	Americium(III) nitrate	AMNO33
Am(OH)2+1	Americium(III) dihydroxide ion(+1)	AMIIIOH2ION
Am(OH)3	Americium(III) hydroxide	AMIIIOH3
Am(OH)4	Americium(IV) hydroxide	AMIVOH4
Am(SO4)2-1	Americium(III) disulfate ion(-1)	AMIIISO42ION
Am[C10H12N2O8]-1	Americium(III) EDTA ion(-1)	AMEDTAION
Am[C10H13N2O8]	Americium(III) hydrogen EDTA	AMIIIHEDTA
Am[C14H18N3O10]-2	Americium(III) DTPA ion(-2)	AMDTPAION
Am[C2H3O3]+2	Americium(III) monoglycolate ion(+2)	AMIIIGLYCOION
Am[C2H3O3]2+1	Americium(III) diglycolate ion(+1)	AMIIIGLYCO2ION
Am[C2H3O3]3	Americium(III) glycolate	AMIIIGLYCO3
Am[C6H5O7]	Americium(III) citrate	AMCTRT
Am[C6H5O7]2-3	Americium(III) dicitrate ion(-3)	AMCTRT2ION
Am[C6H6NO6]	Americium(III) NTA	AMNTA
Am[C6H6NO6]2-3	Americium(III) di-NTA ion(-3)	AMNTA2ION
Am[H2C14H18N3O10]	Americium(III) dihydrogen DTPA	AMH2DTPA
Am[HC10H12N2O8]	Americium(III) hydrogen EDTA	AMHEDTA
Am+3	Americium(III) ion(+3)	AMIIIION
Am+4	Americium ion(+4)	AMIVION
Am2(C2O4)3	Americium(III) oxalate	AMIII2C2O43
Am2(CO3)3	Americium(III) carbonate	AM2CO33
AmBr3	Americium(III) bromide	AMIIIBR3
AmC2O4+1	Americium(III) monooxalate ion(+1)	AMIIIC2O4ION
AmCl+2	Americium(III) monochloride ion(+2)	AMIIICLION
AmCl2+1	Americium(III) dichloride ion(+1)	AMIIICL2ION
AmCl3	Americium(III) chloride	AMIIICL3
AmCO3+1	Americium(III) monocarbonate ion(+1)	AMCO3ION
AmF+2	Americium(III) monofluoride ion(+2)	AMIIIFION
AmF2+1	Americium(III) difluoride ion(+1)	AMIIIF2ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
AmF3	Americium(III) fluoride	AMIIIF3
AmF4	Americium(IV) fluoride	AMIVF4
AmHCO3+2	Americium(III) bicarbonate ion(+2)	AMHCO3ION
AmI3	Americium(III) iodide	AMIIII3
AmNO3+2	Americium(III) mononitrate ion(+2)	AMNO3ION
AmO2(OH)2	Americium dioxide dihydroxide	AMO2OH2
AmO2+1	Dioxyamericium(V) ion(+1)	AMVO2ION
AmO2+2	Dioxyamericium(III) ion(+2)	AMO2ION
AmO2OH	Americium dioxide hydroxide	AMVO2OH
AmOH+2	Americium(III) monohydroxide ion(2)	AMIIIOHION
AmSO4+1	Americium(III) monosulfate ion(+1)	AMIIISO4ION
Ar	Argon	AR
As	Arsenic	ARSEL
As(OH)2Cl3	Arsenic dihydroxide trichloride	ASOH2CL3
As2O3	Arsenic(III) oxide	AS2O3
As2O5	Arsenic(V) oxide	AS2O5
As2O5.1.7H2O	Arsenic(V) oxide 1.7-hydroxide	AS2O5.1.7H2O
As2O5.4H2O	Arsenic(V) oxide tetrahydrate	AS2O5.4H2O
As2S3	Arsenic(III) sulfide	AS2S3
As2S4-2	Diarsenic(III) tetrasulfide ion(-2)	AS2S4ION
As2S5	Arsenic(V) sulfide	AS2S5
AsO+1	Arsenic(III) monoxide ion(+1)	ARSOION
AsO2-1	Arsenic(III) dioxide ion(-1)	ARSO2ION
AsO3-3	Arsenic(III) trioxide ion(-3)	ARSO3ION
AsO4-3	Arsenic(III) tetraoxide ion(-3)	ARSO4ION
Au	Gold	AUEL
Au(CN)2-1	Gold(I) dicyanide ion(-1)	GLDICN2ION
Au(OH)3	Gold(III) hydroxide	GLDIIIOH3
Au(OH)3	Gold(III) hydroxide	GOLDOH3
Au(OH)4-1	Gold(III) tetrahydroxide ion(-1)	GLDIIIOH4ION
Au(OH)5-2	Gold(III) pentahydroxide ion(-2)	GLDIIIOH5ION
Au+1	Gold ion(+1)	GLDIION
Au+3	Gold ion(+3)	GLDIIIION
AuBr	Gold(I) bromide	GLDIBR
AuBr2-1	Gold(I) dibromide ion(-1)	GLDIBR2ION
AuBr3	Gold(III) bromide	GLDIIIBR3
AuBr4-1	Gold(III) tetrabromide ion(-1)	GLDIIIBR4ION
AuCl	Gold(I) chloride	GLDICL
AuCl3	Gold(III) chloride	GLDIIICL3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
AuCl4-1	Gold(III) tetrachloride ion(-1)	GLDIIICL4ION
AuCN	Gold(I) cyanide	GLDICN
AuI	Gold(I) iodide	GLDIIOD
AuOH	Gold(I) hydroxide	GLDIOH
B	Boron	BEL
B(C6H5)4-1	Tetraphenyl borate ion(-1)	BPH4ION
B(OH)3	Boric acid	BOH3
B(OH)4-1	Boron tetrahydroxide ion(-1)	BOH4ION
B2O6H5-1	Diboron oxide pentahydroxide ion(-1)	B2OOH5ION
B2S3	Diboron trisulfide	B2S3
B3O3(OH)4-1	Triboron trioxide tetrahydroxide ion(-1)	B3O3OH4ION
B4O5(OH)4-2	Tetraboron pentaoxide tetrahydroxide ion(-2)	B4O5OH4ION
Ba	Barium	BAEL
Ba(CN)2	Barium cyanide	BACN2
Ba(CN)2.1H2O	Barium cyanide monohydrate	BACN2.1H2O
Ba(CN)2.2H2O	Barium cyanide dihydate	BACN2.2H2O
Ba(H2PO4)2	Barium dihydrogen orthophosphate	BAH2PO42
Ba(HCO3)(OH)	Barium hydroxide bicarbonate	BAOHHCO3
Ba(HCO3)2	Barium bicarbonate	BAHCO32
Ba(HS)2	Barium bisulfide	BAHS2
Ba(HSO3)2	Barium bisulfite	BAHSO32
Ba(HSO4)2	Barium bisulfate	BAHSO42
Ba(NO2)2	Barium nitrite	BANO22
Ba(NO2)2.1H2O	Barium nitrite monohydrate	BANO22.1H2O
Ba(NO3)2	Barium nitrate	BANO32
Ba(OH)2	Barium hydroxide	BAOH2
Ba(OH)2.8H2O	Barium hydroxide octahydrate	BAOH2.8H2O
Ba[C10H12N2O8]-2	Barium EDTA ion(-2)	BAEDTAION
Ba[C10H14N2O8]	Barium dihydrogen EDTA	BAH2EDTA
Ba[C14H18N3O10]-3	Barium DTPA ion(-3)	BADTPAION
Ba[C2H3O2]+1	Barium monoacetate ion(+1)	BAACETION
Ba[C2H3O2]2	Barium acetate	BAAC2
Ba[C2H3O2]2.2H2O	Barium acetate dihydrate	BAAC2.2H2O
Ba[C2H3O2]2.3H2O	Barium acetate trihydrate	BAAC2.3H2O
Ba[C2H3O3]+1	Barium monoglycolate ion(+1)	BAGLYCOLION
Ba[C2H3O3]2	Barium glycolate	BAGLYCOL2
Ba[C2H4NO2]+1	Barium monoglycine ion(+1)	BAGLYCINION
Ba[C2H4NO2]2	Barium diglycine	BAGLYCIN2

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ba[C3H6NO2]+1	Barium mono-(L-alpha-alanine) ion(+1)	BAALANION
Ba[C3H6NO2]2	Barium di-(L-alpha-alanine)	BAALAN2
Ba[C4H4O6]	Barium tartrate	BATARTRT
Ba[C6H5O7]-1	Barium citrate ion(+1)	BACTRTION
Ba[C6H6NO6]-1	Barium NTA ion(-1)	BANTAION
Ba[H2C6H5O7]+1	Barium dihydrogen citrate ion(+1)	BAH2CTRTION
Ba[H3C14H18N3O10]	Barium trihydrogen DTPA	BAH3DTPA
Ba[HC10H12N2O8]-1	Barium hydrogen EDTA ion(-1)	BAHEDTAION
Ba[HC14H18N3O10]-2	Barium hydrogen DTPA ion(-2)	BAHDTPAION
Ba[HC4H4O6]+1	Barium hydrogen tartrate ion(+1)	BAHTARTRTION
Ba[HC6H5O7]	Barium hydrogen citrate	BAHCTRT
Ba[HC6H6NO6]	Barium hydrogen NTA	BAHNTA
Ba[HCOO]+1	Barium monoformate ion(+1)	BACOOHION
Ba[HCOO]2	Barium formate	BACOOH2
Ba[NH2(COO)]2	Barium dicarbamate	BANH2CO22
Ba+2	Barium ion(+2)	BAION
Ba3(PO4)2	Barium phosphate(V)	BA3PO42
BaBr2	Barium bromide	BABR2
BaBr2.1H2O	Barium bromide monohydrate	BABR2.1H2O
BaBr2.2H2O	Barium bromide dihydrate	BABR2.2H2O
BaC2O4	Barium oxalate	BAOX
BaC2O4.0.5H2O	Barium oxalate hemihydrate	BAOX.0.5H2O
BaC2O4.2H2O	Barium oxalate dihydrate	BAOX.2H2O
BaC2O4.3.5H2O	Barium oxalate 3.5 hydrate	BAOX.3.5H2O
BaCl2	Barium chloride	BACL2
BaCl2.1H2O	Barium chloride monohydrate	BACL2.1H2O
BaCl2.2H2O	Barium chloride dihydrate	BACL2.2H2O
BaClOH	Barium hydroxide chloride	BAOHCL
BaCO3	Barium carbonate	BACO3
BaCrO4	Barium chromate(VI)	BACRO4
BaF+1	Barium monofluoride ion(+1)	BAFION
BaF2	Barium fluoride	BAF2
BaHCO3+1	Barium bicarbonate ion(+1)	BAHCO3ION
BaHPO4	Barium hydrogen orthophosphate	BAHPO4
BaI2	Barium iodide	BAI2
BaI2.1H2O	Barium iodide monohydrate	BAI2.1H2O
BaI2.2H2O	Barium iodide dihydrate	BAI2.2H2O
BaI2.7.5H2O	Barium iodide 7.5 hydrate	BAI2.7.5H2O
BaMoO4	Barium molybdate(VI)	BAMOO4

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
BaOH+1	Barium hydroxide ion(+1)	BAOHION
BaS	Barium sulfide	BAS
BaSe	Barium selenide	BASE
BaSeO4	Barium selenate	BASEO4
BaSO3	Barium sulfite	BASO3
BaSO4	Barium sulfate	BASO4
BaWO4	Barium tungstate(VI)	BAWO4
Be	Beryllium	BEEL
Be(OH)2	Berrylium hydroxide	BEOH2
Be+2	Beryllium ion (+2)	BEION
BeO2-2	Beryllate ion (-2)	BEO2ION
Bi	Bismuth	BIEL
Bi(NO3)2+1	Bismuth(III) dinitrate ion(+1)	BINO32ION
Bi(NO3)3	Bismuth(III) nitrate	BINO33
Bi(OH)2+1	Bismuth(III) dihydroxide ion(+1)	BIOH2ION
Bi(OH)3	Bismuth(III) hydroxide	BIOH3
Bi(OH)4-1	Bismuth(III) tetrahydroxide ion(-1)	BIOH4ION
Bi[C10H12N2O8]-1	Bismuth(III) EDTA ion(-1)	BIEDTAION
Bi[C2H3O2]+2	Bismuth(III) monoacetate ion(+2)	BIACETION
Bi[C2H3O2]2+1	Bismuth(III) diacetate ion(+1)	BIACET2ION
Bi[C2H3O2]3	Bismuth(III) triacetate	BIACET3
Bi[HC10H12N2O8]	Bismuth(III) hydrogen EDTA	BIHEDTA
Bi+3	Bismuth ion(+3)	BIION
Bi2(SO4)3	Bismuth(III) sulfate	BI2SO43
Bi2S3	Bismuth(III) sulfide	BI2S3
Bi2Se3	Bismuth(III) selenide	BI2SE3
BiBr+2	Bismuth(III) monobromide ion(+2)	BIBRION
BiBr2+1	Bismuth(III) dibromide ion(+1)	BIBR2ION
BiBr3	Bismuth(III) bromide	BIBR3
BiBr4-1	Bismuth(III) tetrabromide ion(-1)	BIBR4ION
BiCl+2	Bismuth(III) monochloride ion(+2)	BICLION
BiCl2+1	Bismuth(III) dichloride ion(+1)	BICL2ION
BiCl3	Bismuth(III) chloride	BICL3
BiF3	Bismuth(III) fluoride	BIF3
BiI3	Bismuth(III) iodide	BII3
BiNO3+2	Bismuth(III) mononitrate ion(+2)	BINO3ION
BiOH+2	Bismuth(III) monohydroxide ion(+2)	BIOHION
Br-1	Bromide ion (-1)	BRION
Br2	Bromine	BR2

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Br2	Bromine	BR2EL
Br3-1	Tribromide ion(-1)	BR3ION
Br3Pu	Plutonium(III) bromine	PUIIIBR3
BrO-1	Hypobromite(I) ion (-1)	BROION
BrO3-1	Bromate(VI) ion (-1)	BRO3ION
BrO4-1	Perbromate(VII) ion (-1)	BRO4ION
C	Carbon (graphite)	CEL
C10Cl10O	Decachloroketone	KEPONE
C10Cl12	Perchloropentacyclodecane	MIREX
C10Cl8	Perchloronaphthalene	OCLNAPHTHA
C10H10	1,3-Diethenylbenzene	DVINYLBNZ
C10H10	1-Methylindene	MEINDEN1
C10H10	2-Methylindene	MEINDEN2
C10H10Cl2O2	2,4-Dichlorophenoxy-1-methyl propanoate	SBUCLPHOXA
C10H10O2	5-(1-propenyl)-1,3-benzodioxole	ISOSAFROL
C10H10O2	5-Allyl-1,3-benzodioxole	SAFROLE
C10H10O4	Dimethyl orthophthalate	DIMEPHTHAL
C10H10O4	Dimethyl isophthalate	DMIPHTALAT
C10H10O4	Dimethyl terephthalate	DMTEPHTHAL
C10H12	cis-2-Phenyl-2-butene	CPHEBU2EN2
C10H12	Dicyclopentadiene	DCPNTDIEN
C10H12	1,2,3,4-Tetrahydronaphthalene	HDNAPH1234
C10H12	5-Methylindan	MEINDAN5
C10H12	2-Phenyl-1-butene	PHEBU1EN2
C10H12	trans-2-Phenyl-2-butene	TPHEBU2EN2
C10H12N2O5	2-sec-Butyl-4,6-dinitrophenol	DINOSEB
C10H12N2O5	2,4-Dinitro-6-tert-butylphenol	DINOTERB
C10H12N2O8-4	EDTA ion(-4)	EDTAION
C10H12O	3-Phenyl-1-propene	ALLYLANISL
C10H12O	Anethole	ANETHOLE
C10H12O2	2-Methoxy-4-propenylphenol	IEUGENOL
C10H12O4	Diallyl maleate	DALLYLMAL
C10H12O4	3,4,5-Trimethoxybenzaldehyde	TMEBNAL345
C10H14	1-Phenylbutane	BUTYLBNZ
C10H14	p-Cymene	CYMENEP
C10H14	1,2-Diethylbenzene	DIETBNZ12
C10H14	2-Ethyl-1,3-dimethylbenzene	ETMXYLEN2
C10H14	4-Ethyl-m-xylene	ETMXYLEN4

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C10H14	5-Ethyl-m-xylene	ETMXYLEN5
C10H14	4-Ethyl-o-xylene	ETOXYLEN4
C10H14	1,2-Dimethyl-3-ethylbenzene	ETOXYLENE3
C10H14	2-Ethyl-1,4-dimethylbenzene	ETPXYLEN2
C10H14	Isobutylbenzene	IBUBNZ
C10H14	m-Cymene	MCYMENE
C10H14	m-Diethylbenzene	MDETBNZ
C10H14	1-Methyl-3-propylbenzene	ME1PRO3BNZ
C10H14	1-Methyl-2-propylbenzene	ME1PROBNZ2
C10H14	o-Cymene	OCYMENE
C10H14	1,4-Diethylbenzene	PDETBNZ
C10H14	sec-Butylbenzene	SECBUTYBNZ
C10H14	1,2,3,4-Tetramethylbenzene	TMEBNZ1234
C10H14	1,2,3,5-Tetramethylbenzene	TMEBNZ1235
C10H14	1,2,4,5-Tetramethylbenzene	TMEBNZ1245
C10H14	tert-Butylbenzene	TTBUTYLBNZ
C10H14O	5-Isopropyl-2-methylphenol	CARVACROL
C10H14O	2-Methyl-4-(1-methylethenyl)-2-cyclohexene-1-one	CARVON
C10H14O	3-tert-Butylphenol	MTTBUPHE
C10H14O	p-tert-Butylphenol	PTTBUPHENL
C10H14O2	p-tert-Butylcatechol	PTTBUCATE
C10H15N	2,6-Dethylaniline	DETANIL26
C10H15N	1,1-Dimethyl-2-phenylethanamine	PHETERMINE
C10H16	4-Isopropyl-1-methyl-1,5-cyclohexadiene	ALPHELLAND
C10H16	alpha-Terpinene	ALTERPINEN
C10H16	beta-Phellandrene	BEPHELLAND
C10H16	2,2-Dimethyl-3-methylenenorbornane	CAMPHEN
C10H16	D-Limonene	DLIMONEN
C10H16	4-Isopropyl-1-methyl-1,4-cyclohexadiene	GATERPINEN
C10H16	alpha-Pinene	PINENEALP
C10H16	beta-Pinene	PINENEBETA
C10H16	Terpinolene	TERPINOLEN
C10H16O	2-Bornanone	CAMPHOR
C10H16O4	Dipropyl cis-butenedioic acid	DPROMALEAT
C10H16O4-2	Sebacic acid ion(-2)	SEBACATION
C10H17O4-1	Hydrogen sebacic acid ion(-1)	HSEBACATION
C10H18	cis-Decahydronaphthalene	CHD10NAPH
C10H18	Trans-Decahydronaphthalene	THD10NAPHT

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C10H18O	alpha-Terpineol	ALTEROL
C10H18O2	5-Hexyldihydro-2(3H)-furanone	GDECALACTN
C10H18O4	Sebacic acid	SEBACICAC
C10H19O2-1	Decanoate ion(-1)	DECANION
C10H20	n-Butylcyclohexane	BUCHXAN
C10H20	1-Decene	DECEN1
C10H20O	Decanal	DECANAL1
C10H20O	L-Menthol	MENTHOL1
C10H20O2	1-Nonanecarboxylic acid	DECNOICACI
C10H20O2	2-Ethylhexyl acetate	ET2HXLACET
C10H20O2	Isopentyl isovalerate	IPENTVALRT
C10H22	n-Decane	C10H22
C10H22	2-Methylnonane	MENONAN2
C10H22	3-Methylnonane	MENONAN3
C10H22	4-Methylnonane	MENONAN4
C10H22	5-Methylnonane	MENONAN5
C10H22	2,2-Dimethyloctane	MEOCTAN22
C10H22O	1-Decanol	DECANOL1
C10H22O	Dipentyl ether	DIPENTETH
C10H22O	8-Methyl-1-nonanol	ME8NONOL1
C10H22O4	Butoxytriethylene glycol	TELNGLYBU
C10H22O4	Tripropylene glycol monomethyl ether	TPROGLIME
C10H22O5	Dimethoxytetraglycol	TEGLYDMETH
C10H23N	Di-n-Pentylamine	DAMYLAMN
C10H23N	1-Decylamine	DECYLAMN
C10H24N+1	Hydrogen 1-decylamine ion(+1)	HDECYLAION
C10H2Cl6	1,2,3,4,5,6-Hexachloronaphthalene	HXCLNAPHLN
C10H4Cl2O2	2,3-Dichloro-1,4-naphthalenedione	DICHLONE
C10H5Cl7	3-Chlorochlordene	HEPTACHLOR
C10H5Cl7O	Epoxyheptachlor	HCLEPOX
C10H6Cl8	alpha-Chlordane	ALCHLORDAN
C10H6Cl8	Octachloro-4,7-methanotetrahydroindane	CHLORDANE
C10H6Cl8	trans-Chlordane	GCHLORDANE
C10H6O2	1,4-Naphthalenedione	NAPHQUINON
C10H7Br	1-Bromonaphthalene	BRNAPHTH1
C10H7Cl	2-Chloronaphthalene	CLNAPHTH2
C10H7Cl	1-Chloronaphthalene	CLNAPTH1
C10H8	Naphthene	NAPHTHALEN
C10H8O	1-Naphthalenol	NAPHTHOL1

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C10H8O	2-Naphthalenol	NAPTHOL2
C10H9N	2-Naphthalenamine	NAPHTHLAM2
C10H9N	1-Naphthalenamine	NAPHTHYAM1
C11H10	1-Methylnaphthalene	ME1NAPHTH
C11H10	2-Methylnaphthalene	ME2NAPHTH
C11H11N2O2-1	L-Tryptophane ion(-1)	LTRYPTOPHION
C11H12Cl2O3	2-(2,4-Dichlorophenoxy)propyl acetate	DPROESTE24
C11H12N2O2	L-Tryptophane	HLTRYPTOPH
C11H13N2O2+1	Hydrogen L-Tryptophane ion(+1)	H2LTRYPTOPHION
C11H14	4,6-Dimethylindan	MEINDAN46
C11H14	4,7-Dimethylindan	MEINDAN47
C11H14O	1-(2,4,6-Trimethylphenyl)ethanone	TACETPHEON
C11H14O2	n-Butyl benzoate	BUBNZAT
C11H14O2	4-tert-Butylbenzoic acid	TTBUBNZAC
C11H15NO3	2-Methylethoxyphenyl carbamate	PROPOXUR
C11H16	1-Isopropyl-3,5-dimethylbenzene	IPRODMEBNZ
C11H16	n-Pentylbenzene	PENTYLBNZ
C11H16	Pentamethylbenzene	PMEBNZ
C11H16O	4-tert-Amylphenol	PTTAMYLPHE
C11H20O2	2-Ethylhexyl acrylate	ET2HXLACRY
C11H21O2-1	Undecanoic acid ion(-1)	UNDECION
C11H22	1-Undecene	UNDECEN1
C11H22O	2-Hendecanone	MENONYLKET
C11H22O	Undecanal	UNDECANAL1
C11H22O2	Methyl decanoate	MECAPRAT
C11H22O2	Undecanoic acid	UNDECACID
C11H24	n-Undecane	C11H24
C11H24	2-Methyldecane	MEDECAN2
C11H24	4-Methyldecane	MEDECAN4
C11H24O	n-Undecanol	UNDECNOL1
C11H25N	1-Aminoundecane	UNDECYLAMN
C12Cl8O	Octachlorodibenzofuran	OCDF
C12Cl8O2	Octachlorodibenzo-p-dioxin	OCDBPOX
C12H10	1,8-Ethylenenaphthalene	ACENAPHTHN
C12H10	1,1'-Biphenyl	BIPHENYL
C12H10Cl2N2	3,3'-Dichloro-4,4'-diaminobiphenyl	DCBNZIDN33
C12H10Cl2N2O	3,3'-Dichloro-4,4'-diaminodiphenyl ether	DCDPHAMETH
C12H10O	Diphenyl ether	DIPHENETH
C12H10O	1-Hydroxy-2-phenylbenzene	HDPHEPHE1

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C12H11Cl3O3	2-(2,4-Dichlorophenoxy)-4-chloro-2-butenyl acetate	DCLCROES24
C12H11N	p-Aminodiphenyl	AMNDPHE4
C12H11N	Diphenylamine	DIPHENAMN
C12H11N3	p-Aminoazobenzene	AMNAZOBNZ4
C12H12	1,2-Dimethylnaphthalene	DMENAPH12
C12H12	1,3-Dimethylnaphthalene	DMENAPH13
C12H12	1,4-Dimethylnaphthalene	DMENAPH14
C12H12	1,5-Dimethylnaphthalene	DMENAPH15
C12H12	1,6-Dimethylnaphthalene	DMENAPH16
C12H12	1,8-Dimethylnaphthalene	DMENAPH18
C12H12	2,3-Dimethylnaphthalene	DMENAPH23
C12H12	1-Ethylnaphthalene	ETNAPH1
C12H12	2-Ethylnaphthalene	ETNAPH2
C12H12	2,6-Dimethylnaphthalene	MENAPH26
C12H12	2,7-Dimethylnaphthalene	MENAPH27
C12H12N2	4,4'-Diaminodiphenyl	BENZIDINE
C12H12N2O	4,4'-Diaminodiphenyl ether	DAMNDPHEOX
C12H13Cl3O3	2-(2,4,5-Trichlorophenoxy)-1-methylpropyl acetate	TMEPROACET
C12H14	1,2,3-Trimethylindene	MEINDEN123
C12H14Cl2O3	2-(2,4-Dichlorophenoxy)butylacetate	DBUACET24
C12H14O4	Diethyl-o-phthalate	DIETPHTHL
C12H14O4	Monoisobutylphthalate	MIBE
C12H16	Cyclohexylbenzene	CHXYLCBZ
C12H18	m-Diisopropylbenzene	DIPROBNZ3
C12H18	p-Diisopropylbenzene	DISPRPBNZP
C12H18	1-Phenylhexane	HXYLBNZ
C12H18O	2,6-Diisopropylphenol	DIPROPHE26
C12H20O	2-Cyclohexylcyclohexanone	CHXLCHXON
C12H20O4	Dibutyl maleate	DBUMALEAT
C12H22	Bicyclohexyl	BCHXYL
C12H23N	Dicyclohexylamine	DCHXYLAMN
C12H23O2-1	Lauric acid ion(-1)	DODECION
C12H24	1-Dodecene	DODECEN1
C12H24N+1	Hydrogen dicyclohexylamine ion(+1)	HDCHXYLAMION
C12H24O	1-Dodecanal	DODECANAL
C12H24O2	Lauric acid	LAURICACID
C12H26	Dodecane	C12H26
C12H26O	Di-n-Hexyl ether	DHXYLETH

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C12H26O	1-Dodecanol	DODECANOL1
C12H26O3	bis(2-Butoxyethyl) ether	DETGLYBUET
C12H27N	DI-n-Hexylamine	DINHXLAM
C12H27N	n-Dodecylamine	DODECYLAMN
C12H27N	Tributylamine	TBUAMN
C12H28N+1	Hydrogen n-dodecylamine ion(+1)	HDODECYAION
C12H2Cl5O	2,3,4,7,8-Pentachlorodibenzofuran	PCDF23478
C12H2Cl6O	1,2,3,6,7,8-Hexachlorodibenzofuran	HCBF123678
C12H2Cl6O	1,2,3,4,7,8-Hexachlorodibenzofuran	HCDBF12347
C12H2Cl6O	2,3,4,6,7,8-Hexachlorodibenzofuran	HDF234678
C12H2Cl6O2	1,2,3,6,7,8-Hexachloro-p-dioxin	HCPD123678
C12H3Cl5O	1,2,3,7,8-Pentachlorodibenzofuran	PCDF12378
C12H3Cl5O2	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	PCPDO12378
C12H4Cl4O	2,3,7,8-Tetrachlorodibenzofuran	TCDF2378
C12H4Cl4O2	2,3,7,8-Tetrachlorodibenzo-p-dioxin	TCDD2378
C12H8	Acenaphthalene	ANAPHLEN
C12H8	Biphenylene	BPHELEN
C12H8Cl6	Aldrin	ALDRINE
C12H8Cl6O	Endrin ketone	BENDRKET
C12H8Cl6O	Aldrin epoxide	DIELDRINE
C12H8Cl6O	Endrin	EDRINE
C12H8O	Dibenzofuran	DBNZFURAN
C12H8S	Dibenzothiophene	DBTHIOPHE
C12H9BrO	1-Bromo-4-phenoxybenzene	BRPHOXBN1
C12H9ClO	1-Chloro-4-phenoxybenzene	CLPHEOBNZ
C12HCl7O	1,2,3,4,6,7,8-Heptachlorodibenzofuran	HCLDBNZFRN
C12HCl7O2	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	HCLDBPDOX
C13H10	2,2'-Methylenebiphenyl	FLUORENE
C13H10O	Benzophenone	BNZPHENON
C13H12	Diphenylmethane	DPHEME
C13H12	2-Methyl-1,1'-biphenyl	MEBIPHENL2
C13H12Cl2N2	4,4'-Methylenebis(2-chlorobenzenamine)	MOCA
C13H14	2-Isopropylnaphthalene	IPRONAPH
C13H14	2,3,5-Trimethylnaphthalene	MENAPH235
C13H14	2,3,6-Trimethylnaphthalene	MENAPH236
C13H14N2	4,4'-Methylenediamine	MEDANILINE
C13H20	1-Heptylbenzene	HEPTBNZ1
C13H25O2-1	Tridecanoic acid ion(-1)	TDECATION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C13H26	1-Tridecene	C13H26
C13H26O	Tridecanal	TRIDECANAL
C13H26O2	n-Butyl nonanoate	BUNONANOAT
C13H26O2	Methyl dodecanoate	MELAURATE
C13H26O2	Tridecanoic acid	TDECNOICAC
C13H28	n-Tridecane	C13H28
C13H28O	1-Tridecanol	TRIDECANL1
C13H6Cl6O2	2,2'-Methylenebis(3,4,6-trichlorophenol)	HCLPHENE
C13H8O	Fluorenone	FLUORENON
C13H9N	2,3-Benzoquinoline	ACRIDINE
C14H10	Anthracene	ANTHRACEN
C14H10	Diphenylacetylene	DPHEACELN
C14H10	Phenanthrene	PHENANTHR
C14H10Cl4	1,1-Bis(4-chlorophenyl)-2,2-dichloroethane	DDD44
C14H12	(Z)-1,2-Diphenylethene	CSTILBEN
C14H12	1-Methylfluorene	MEFLUOREN1
C14H12	4-Methylfluorene	MEFLUOREN4
C14H12	trans-Stilbene	TSTILBEN
C14H12O2	Benzyl benzoate	BNZBNZAT
C14H14	1,1-Diphenylethane	DIPHENET11
C14H14	1,2-Diphenylethane	DPHEET12
C14H14O	Benzyl ether	DBNZETH
C14H16	1-n-Butylnaphthalene	BUNAPH1
C14H16N2	o-Tolidine	OTOLUIDINE
C14H16N2O2	3,3'-Dimethoxybenzidine	DMOXBNZDN
C14H17Cl3O4	2-Butoxyethyl-2,4,5-trichlorophenoxyacetate	BLADEX
C14H18Cl2O4	2-Butoxyethyl-2-(2,4-dichlorophenoxy)acetate	DBUOXETEST
C14H18N3O10-5	DTPA ion(-5)	DTPAION
C14H18O4	Dipropyl phthalate	DPROPHTH
C14H20O2	2,6-Di-tert-butylbenzoquinone	TTBUBNZQI
C14H22	1-Octylbenzene	OCTYLBNZ
C14H22O	2,4-Di-tert-butylphenol	DTTBUPHE24
C14H22O	p-tert-Octylphenol	PTTOCTYPHE
C14H27O2-1	n-Tetradecoic acid ion(-1)	TEDEACION
C14H28	1-Tetradecene	TETDECEN1
C14H28O	2-Tetradecanone	TEDECON2
C14H28O2	n-Tetradecanoic acid	MYRSTICACD

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C14H30	n-Tetradecane	C14H30
C14H30O	1-Tetradecanol	TEDECANOL1
C14H31N	Tetradecylamine	TEDECYLAMN
C14H8Cl4	4,4'-DDE	DDE44
C14H8O2	Anthraquinone	ANTHRAQUI
C14H9Cl5	2,4'-DDT	DDT24
C14H9Cl5	p,p'-DDT	DDT44
C14H9Cl5O	1,1-Bis(p-chlorophenyl)-2,2,2-trichloroethanol	DICOFOL
C14H9NO2	2-Amino-9,10-anthraquinone	AMNANTRAQ2
C15H10	4,5-Methylenephenanthrene	MEPHENTHPE
C15H11NO2	1-Amino-2-methylanthraquinone	AMMEANTHQ
C15H12	2-Methylanthracene	MEANTHRA2
C15H12	9-Methylphenanthrene	MEPHENANT9
C15H12	2-Methylphenanthrene	MEPHTHR2
C15H12	1-Phenylindene	PHEINDEN1
C15H13N	1-Phenanthrenemethanamine	MAMNPHTHR1
C15H16O	p-alpha-Cumylphenol	ALCUMYLPHL
C15H16O	p-Cumylphenol	PCUMYLPHE
C15H16O2	2,2-Bis(p-hydroxyphenyl)propane	BISPHENOLA
C15H24	n-Nonylbenzene	NONYLBNZ
C15H24O	4-Nonylphenol	PNONYLPHE
C15H24O	2,6-DI-tert-Butyl-p-cresol	TTDCRESL26
C15H26O	3,7,11-Trimethyl-1,6,10-dodecatrien-3-ol	NEROLIDOL
C15H29O2-1	Pentadecanoic acid ion(-1)	PTDEATION
C15H30	1-Pentadecene	PENTADECEN
C15H30O	2-Pentadecanone	PNTDEON2
C15H30O2	Methyl tetradecanoate	METDECAAT
C15H30O2	Pentadecanoic acid	PNTDECAC
C15H32	n-Pentadecane	C15H32
C15H32O	1-Pentadecanol	PNTDECANOL
C15H33N	1-Pentadecanamine	PDECANAMN1
C16H10	Fluoranthene	FLUANTHEN
C16H10	Pyrene	PYRENE
C16H12	2-Phenylnaphthalene	PHENAPH2
C16H12	1-Phenylnaphthalene	PHENNAPTH1
C16H14	2,7-Dimethylphenanthrene	MEPHEN27
C16H14	3,6-Dimethylphenanthrene	MEPHEN36
C16H14Cl2O3	4,4'-Dichlorobenzilic acid ethyl ester	CLBNZLATE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C16H15Cl3O2	2,2-Bis(p-methoxyphenol)-1,1,1-trichloroethane	MEOXYCL
C16H20	n-Hexylnaphthalene	HXYLNAPHTH
C16H21Cl3O3	2,4,5-Trichlorophenoxy-2-ethylhexylacetate	THEXACE245
C16H21Cl3O3	(2,4,5-Trichlorophenoxy)-(2,4,4-trimethylpentyl)acetate	TIOCACE245
C16H22Cl2O3	Isooctyl (2,4-dichlorophenoxy)acetate	DOCTYACE24
C16H22O4	Diisobutylphthalate	DIBE
C16H22O4	Di-n-Butyl phthalate	DIBUTYPHTL
C16H24	6-Hexyltetralin	HTDNAP1234
C16H26	n-Decylbenzene	DECYLBNZ
C16H31O2-1	Palmitic acid ion(-1)	PALMATION
C16H32	1-Hexadecene	C16H32
C16H32	1-Decylcyclohexane	DECYLCHXN
C16H32O2	Ethyl tetradecanoate	ETDECANOAT
C16H32O2	Palmitic acid	PALMITACID
C16H34	n-Hexadecane	C16H34
C16H34O	Di-n-Octyl ether	DOCTYLETH
C16H34O	1-Hexadecanol	HEXDECANOL
C16H34S	1-Hexadecanethiol	CETYLMCTN
C17H10O	7H-Benz[de]anthracen-7-one	BNZTHRON
C17H12	Benzo[a]fluorene	BNZFLUOREN
C17H12	2-Methylpyrene	MEPYREN2
C17H14O5	3-(alpha-Acetonylfurfuryl)-4-hydroxycoumarin	COUMFURYL
C17H28	1-Phenylundecane	UNDECBNZ
C17H33O2-1	Heptadecanoic acid ion(-1)	HPTDATION
C17H34	1-Heptadecene	HEPTDECEN1
C17H34O2	Heptadecanoic acid	HPTDECNOAC
C17H34O2	Methyl hexadecanoate	MEHXDECNAT
C17H36	n-Heptadecane	C17H36
C17H36O	1-Heptadecanol	HPTDECANL1
C18H12	Benzo[a]anthracene	BNZANTHR
C18H12	Chrysene	CHRYSEN
C18H12	Triphenylene	TPHENYLEN
C18H14	m-Terphenyl	MTERPHENYL
C18H14	o-Terphenyl	OTERPHENYL
C18H14	p-Terphenyl	PTERPHENYL
C18H20	4-Methyl-2,4-diphenyl-1-pentene	DPHME4PTE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C18H22	2,3-Dimethyl-2,3-diphenyl butane	DMDPH23BU
C18H30	Dodecylbenzene	DDECYLBNZ
C18H30O2	Linolenic acid	LINOLENAC
C18H32O2	Linoleic acid	LINOLEICAC
C18H34O2	Oleic acid	OLEICAC
C18H34O4	Dibutyl sebacate	DBUSEBACAT
C18H34O4	Dihexyl adipate	DHXYLADIP
C18H35O2-1	Stearic acid ion(-1)	STERATION
C18H36	1-Octadecene	OCTADECEN1
C18H36O2	Ethyl hexadecanoate	EHXDECAT
C18H36O2	Stearic acid	STEARICACI
C18H38	n-Octadecane	C18H38
C18H38O	Dinonyl ether	DINONYLETH
C18H38O	1-Octadecanol	OCTADECNL1
C19H15O3	Coumatetralyl	COUMTRALYL
C19H16O4	3-(alpha-Acetonylbenzyl)-4-hydroxycoumarin	WARFARINE
C19H20O4	Butyl benzyl phthalate	BUBNZPHTHA
C19H26	1-Nonylnaphthalene	NONYLNAPH1
C19H32	Tridecylbenzene	TDECYLBNZ
C19H34O2	Methyl cis,cis-9,12-octadecadienoate	MELINOL
C19H36O2	Methyl oleate	MEOLEATE
C19H37O2-1	Nonadecanoic acid ion(-1)	NONDATION
C19H38	1-Nonadecene	NONANDECN1
C19H38O2	Methyl octadecanoate	MEODECAT
C19H38O2	Nonadecanoic acid	NONDECICAC
C19H40	n-Nonadecane	C19H40
C19H40O	1-Nonadecanol	NONDECNOL1
C20H12	2,3-Benzofluoranthene	BNZBFLUO
C20H12	10,11-Benzofluoranthene	BNZJFLUO
C20H12	11,12-Benzofluorene	BNZKFLUO
C20H12	Benzo[a]pyrene	BNZPYREN
C20H12	Perylene	PERYLENE
C20H16	9,10-Dimethyl-1,2-benzanthracene	DMBNZAN712
C20H16	Triphenylethylene	TPHEETHLN
C20H28	1-Decylnaphthalene	DECYLNAPH1
C20H30O2	Abietic acid	ABIETICAC
C20H31N	Dehydroabietylamine	DMIPMAPHRN
C20H38O2	Cetyl methacrylate	CETYMEACRY

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C20H39O2-1	1-Eicosanoic acid ion(-1)	EICOATION
C20H40	1-Eicosene	EICOSEN1
C20H40O2	1-Eicosanoic acid	EICOAC1
C20H42	n-Eicosane	C20H42
C20H42O	1-Eicosanol	EICOSANAL1
C21H16	3-Methylbenza[j]aceanthrene	MEACANTHB3
C21H20Cl2O3	Permethrin	PERMETHRN
C21H28O3	Pyrethrin I	PYRETHRIN1
C21H44	Heneicosane	HENEICOSAN
C22H12	Benzo[ghi]perylene	BNZPERLGHI
C22H12	Indenopyrene	INDENPYREN
C22H14	Dibenzo[a,h]anthracene	DBANTHAH
C22H28O5	Pyrethrin II	PYRETHRIN2
C22H42O4	Di(2-ethylhexyl) adipate	BEHXLADIP
C22H42O4	Dioctyl hexadioate	DNODA
C22H44O2	n-Butyl stearate	BUSTEARAT
C22H46	Docosane	DOCOSAN
C23H15ClO3	2-[(p-Chlorophenyl)phenylacetyl]-1,3-indandione	CLPHACINON
C23H16O4	2-(Diphenylacetyl)-1,3-indandione	DIPHACINON
C23H22O6	Rotenone	RETONON
C23H48	Tricosane	TRICOSAN
C24H14	Dibenzo[a,e]pyrene	DBNZPYRAE
C24H14	Dibenzo(a,l)pyrene	DBNZPYRAL
C24H14	Dibenzo[a,h]pyrene	DBPYRAH
C24H14	Dibenzo[b,h]pyrene	DBPYRAI
C24H38O4	2-Ethylhexyl phthalate	BETHXPHTH2
C24H38O4	Diisooctyl phthalate	DIOCTYLPHT
C24H38O4	Di-n-octyl phthalate	DOPHTH
C24H50	n-Tetracosane	TTCOSAN
C25H52	Pentacosane	PENTCOSAN
C26H20	Tetraphenylethylene	TPHEETLN
C26H54	Hexacosane	HXCOSAN
C27H46O	Cholesterol	CHOLESTROL
C27H56	Heptacosane	HPTCOSAN
C28H46O4	Diisodecyl phthalate	DIDECYLPHT
C28H58	n-Octacosane	OCTACOSAN
C29H60	n-Nonacosane	NONACOSAN
C2CaH3NO5	Calcium bicarbonate carbamate	CAHCO3AMCT

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C2Cl2F4	1,2-Dichlorotetrafluoroethane	CL3FL4ET
C2Cl3F3	1,1,2-Trichlorotrifluoroethane	TCLTFETH
C2Cl4	1,1,2,2-Tetrachloroethylene	CL4ETHEN
C2Cl4F2	1,1,2,2-Tetrachlorodifluoroethane	CLFLET1122
C2Cl4F2	1,1,1,2-Tetrachlorodifluoroethane	TCLDFETH
C2Cl4O	Trichloroacetyl chloride	CL3ACETCL
C2Cl6	Perchloroethane	CL6ET
C2ClF5	1-Chloro-1,1,2,2,2-pentafluoroethane	CLFL5ET
C2F4	Perfluoroethene	FL4ETHLN
C2F6	Hexafluoroethane	FL6ET
C2H2	Acetylene	ACETYLENE
C2H2Br4	1,1,2,2-Tetrabromoethane	TBRE1122
C2H2Cl2	cis-1,2-Dichloroethylene	DCLETC12
C2H2Cl2	1,1-Dichloroethylene	DCLETE11
C2H2Cl2	trans-1,2-Dichloroethylene	TRDICLEE12
C2H2Cl2F2	1,2-Dichloro-1,1-difluoroethane	CL2FL2ETH
C2H2Cl2F2	1,2-Dichloro-1,2-difluoroethane	CL2FL2ETHS
C2H2Cl2O	Chloroacetyl chloride	CLACETCL
C2H2Cl2O2	2,2-Dichloroacetic acid	CL2ACETAC
C2H2Cl4	1,1,1,2-Tetrachloroethane	CL4ET1112
C2H2Cl4	1,1,2,2-Tetrachloroethane	CL4ET1122
C2H2ClF3	2-Chloro-1,1,1-trifluoroethane	CLFL3ETH
C2H2ClO2-1	Chloroacetate ion(-1)	CLACETATION
C2H2F2	1,1-Difluoroethene	FL2ETHLN11
C2H2F4	1,1,1,2-Tetrafluoroethane	FL4ET1112
C2H2O2	1,2-Ethanedione	GLYOXAL
C2H2O4	Oxalic acid	OXALAC
C2H3Br	Bromoethene	BRETHENE
C2H3BrO	Acetyl bromide	ACETBR
C2H3Cl	Vinyl chloride	VINYLCL
C2H3Cl3	1,1,1-Trichloroethane	CL3ET111
C2H3Cl3	1,1,2-Trichloroethane	CL3ET112
C2H3ClO	Acetyl chloride	ACETCL
C2H3ClO2	Chloroacetic acid	CLACETAC
C2H3F3	1,1,1-Trifluoroethane	FL3ET111
C2H3FO2	Fluoroacetic acid	FLACETAC
C2H3MgNO5	Minnesotaite	MGHCO3AMCT
C2H3N	Acetonitrile	ACENITRILE
C2H3NS	Methyl isothiocyanate	MEICYANT

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C2H3O2-1	Acetate ion(-1)	ACETATEION
C2H3O3-1	Glycolate ion(-1)	GLYCOLATION
C2H4	Ethene	C2H4
C2H4Br2	1,1-Dibromoethane	BR2ET11
C2H4Br2	1,2-Dibromoethane	DBRE12
C2H4Cl2	1,1-Dichloroethane	CL2ET11
C2H4Cl2	1,2-Dichloroethane	CL2ET12
C2H4Cl2O	Dimethyl-1,1-dichloroether	BISCLMEETH
C2H4F2	1,1-Difluoroethane	FL2ET11
C2H4F2	1,2-Difluoroethane	FL2ET12
C2H4N2O2	Oxamide	OXAMIDE
C2H4N2O6	Ethanediol dinitrate	ELNGLINTRT
C2H4NO2-1	Glycinate ion(-1)	GLYCINATION
C2H4O	Acetic aldehyde	ACETALDEHD
C2H4O	1,2-Epoxyethane	ETHYLENOXD
C2H4O2	Acetic acid	ACETACID
C2H4O2	Methyl formate	MEFORMATE
C2H4O3	Glycolic acid	GLYCOLACID
C2H4O4	Formic acid, dimer	FORM2
C2H5Br	Bromoethane	EBROMID
C2H5Cl	Ethyl chloride	CLETHANE
C2H5ClO	2-Chloroethanol	CLETNOL2
C2H5F	Ethyl fluoride	ETFL
C2H5I	Ethyl iodide	EIODID
C2H5NO	Ethanamide	ACETAMIDE
C2H5NO	N-Methylformamide	NMEFORM
C2H5NO2	Glycine	GLYCINE
C2H5NO2	Nitroethane	NITROET
C2H6	Ethane	C2H6
C2H6NO2+1	Hydrogen glycine ion(+1)	HGLYCINION
C2H6O	Dimethyl ether	DMEETHER
C2H6O	Ethanol	ETHANOL
C2H6O2	1,2-Ethanediol	ETHEGLYCOL
C2H6OS	Dimethyl sulphoxide	DIMESULFOX
C2H6S	Dimethyl sulfide	DMESFIDE
C2H6S	Ethanethiol	ETMCAPTAN
C2H6S2	Dimethyl disulfide	DMEDSFIDE
C2H7N	Dimethylamine	DMEA
C2H7N	Ethylamine	ETAMINE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C2H7NO	2-Aminoethanol	MEXH
C2H8N+1	Hydrogen dimethylamine ion(+1)	DMEAHION
C2H8N+1	Hydrogen ethylamine ion(+1)	ETAMHION
C2H8N2	Ethylenediamine	ENAMN2
C2H8N2	1,1-Dimethylhydrazine	MEHYRAZN11
C2H8NO+1	Hydrogen 2-Aminoethanol ion(+1)	MEXH2ION
C2HBrClF3	1,1,1-Trifluoro-2-bromo-2-chloroethane	HALOTHANE
C2HCl3	Trichloroethylene	TCLETHLN
C2HCl3O	2,2-Dichloroacetyl chloride	CL2ACETCL
C2HCl3O	Trichloroacetaldehyde	CL3ACETAL
C2HCl3O2	Trichloroethanoic acid	CL3ACETAC
C2HCl5	Pentachloroethane	CL5ET
C2HClF4	1-Chloro-1,1,2,2-tetrafluoroethane	CL1F1122ET
C2HClF4	1-Chloro-1,2,2,2-tetrafluoroethane	CLFL4ETH
C2HF5	Pentafluoroethane	FL5ET
C2HO4-1	Hydrogen oxalate ion(-1)	HOXALATION
C2N2	Cyanogen	CYANOGEN
C2O4-2	Oxalate ion(-2)	OXALATION
C30H60O	2-Tridecanone	TRIDECANN2
C30H62	Tricontane	TRICONTAN
C31H46O2	Phytomenadione	VITAMK1
C31H64	Hentriacontane	HENTRIACNT
C32H66	n-Dotriacontane	DOCTRIACON
C33H68	n-Tritriacontane	TTACONT
C34H70	n-Tetratriacontane	TETRTRIACT
C35H72	n-Pentatriacontane	PENTTRIACT
C36H74	n-Hexatriacontane	HXTACONTAN
C3Cl6	1,1,2,3,3,3-hexachloro-1-propene	HXCLPROPN1
C3F6	Perfluoro-1-propene	FL6PRPLENE
C3H10N+1	Hydrogen isopropylamine ion(+1)	IPRAMHION
C3H10N+1	Hydrogen propylamine ion(+1)	PROPAMHION
C3H10N+1	Triethylamine ion(+1)	TRIMEAHION
C3H2N2	Propanedinitrile	PRPADNTRIL
C3H2O4-2	Malonic acid ion(-2)	MALONATION
C3H3Cl	3-Chloro-1-propyne	CL1PRPYNE3
C3H3ClO	2-Propenyl chloride	ACRYLYLCL
C3H3N	2-Propenenitrile	ACRYLONTRL
C3H3O2-1	Acrylate ion(-1)	ACRYLATEION
C3H3O4-1	Hydrogen malonic acid ion(-1)	HMALONATION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C3H4	1,2-Propadiene	ALLENE
C3H4	1-Propyne	MEACETLEN
C3H4Cl2	2,3-Dichloropropene	CL2PRPEN23
C3H4Cl2	1,1-Dichloropropene	CLPROPEN11
C3H4Cl2	(E)-1,3-Dichloro-1-propene	ECLPRPEN13
C3H4Cl2	(Z)-1,3-Dichloro-1-propene	ZCLPRPEN13
C3H4Cl2O	1,3-Dichloro-2-propanone	CLPRP2ON13
C3H4Cl2O2	2-Chloroethyl chloroformate	CLECLFORMT
C3H4N2O	Cyanoacetamide	CYACETAMD
C3H4O	2-Propenal	ACROLEIN2
C3H4O	Propargyl alcohol	PROPGLAL
C3H4O2	Acrylic acid	HACRYLATE
C3H4O4	Malonic acid	MALONICAC
C3H5Br2Cl	1,2-Dibromo-3-chloropropane	BRCLPRP123
C3H5Cl	1-Chloro-2-propene	ALLYLCL
C3H5Cl	2-Chloropropene	CLPRPEN2
C3H5Cl3	1,2,3-Trichloropropane	TCLPRP123
C3H5ClO	1-Chloro-2,3-epoxypropane	CLEPOXPPN1
C3H5ClO2	Ethyl chloroformate	ETCLFORMAT
C3H5ClO2	Methyl chloroacetate	MECLACET
C3H5N3O9	Trinitroglycerin	NLGLYCER
C3H5NO	2-Propenamide	ACRYLAMIDE
C3H5NO	3-Hydroxypropanenitrile	HACRLNL
C3H5O2-1	Propionic acid ion(-1)	PROPANATEION
C3H5O3-1	Lactic acid ion(-1)	LACTATION
C3H6	Propylene	C3H6
C3H6	Cyclopropane	CYCLPRPN
C3H6Cl2	1,1-Dichloropropane	CL2PRPN11
C3H6Cl2	1,2-Dichloropropane	DCLPRP12
C3H6Cl2	1,3-Dichloropropane	DICLPRP13
C3H6Cl2	1,3-Dichloropropane	PROPCL13
C3H6Cl2O	2,3-Dichloro-1-propanol	CLPROP1L23
C3H6Cl2O	1,3-Dichloro-2-propanol	CLPROP2L13
C3H6N2	3-Aminopropanenitrile	PROPAM3NL
C3H6N2O2	Malonamide	MALONAMD
C3H6N6O6	sym-Trimethylenetrinitramine	RDX
C3H6NO2-1	beta-Alanine ion(-1)	BALANNION
C3H6NO2-1	DL-Alanine ion(-1)	DLALANNION
C3H6NO2-1	L-alpha-Alanine ion(-1)	LALANNION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C3H6NO2-1	Sarcosine ion(-1)	SARCOSNION
C3H6NO3-1	L-serine ion(-1)	LSERNION
C3H6NO3-1	2-Aminoethanol carboxy ion(-1)	MEXCO2ION
C3H6O	Acetone	ACETONE
C3H6O	2-Propen-1-ol	ALYLALCHOL
C3H6O	Methyl vinyl ether	MEVINETHER
C3H6O	Propionaldehyde	PRPIONALDH
C3H6O	2-Methyloxiran	PRPYLOXD12
C3H6O2	Ethyl formate	EFORMAT
C3H6O2	Propionic Acid	HPROPANATE
C3H6O2	Methylacetate	MACTAT
C3H6O3	Lactic acid	LACTICAC
C3H7Br	1-Bromopropane	BRPRPAN1
C3H7Br	2-Bromopropane	BRPRPAN2
C3H7Cl	n-Propyl chloride	CLPRP1
C3H7Cl	Isopropyl chloride	CLPRP2
C3H7ClO	1-Chloro-2-propanol	CL1PROL2
C3H7ClO	2-Chloro-1-propanol	CL2PROL1
C3H7I	Propyl iodide	IPRPAN1
C3H7I	Isopropyl iodide	IPRPAN2
C3H7NO	N,N-Dimethylformamide	DIMEFRMAMN
C3H7NO	N-Methylacetamide	NMEACETAMD
C3H7NO	Propanamide	PROPAMIDE
C3H7NO2	beta-Alanine	BALANINE
C3H7NO2	DL-Alanine	DLALANINE
C3H7NO2	Lactamide	LACTAMID
C3H7NO2	L-alpha-Alanine	LALANINE
C3H7NO2	1-Nitropropane	NITPRPN1
C3H7NO2	2-Nitropropane	NITPRPN2
C3H7NO2	Sarcosine	SARCOSINE
C3H7NO2	Ethyl carbamate	URETHAN
C3H7NO3	L-Serine	LSERINE
C3H8	Propane	C3H8
C3H8NO2+1	Hydrogen beta-alanine ion(+1)	HBALANION
C3H8NO2+1	Hydrogen DL-alanine ion(+1)	HDLALANION
C3H8NO2+1	Hydrogen L-alanine ion(+1)	HLALANION
C3H8NO2+1	Hydrogen sarcosine ion(+1)	HSARCOSNION
C3H8NO3+1	Hydrogen L-serine ion(+1)	HLSERNION
C3H8O	2-Propanol	ISPROPANOL

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C3H8O	Methoxyethane	MEETETHER
C3H8O	1-Propanol	PROPANOL1
C3H8O2	1,2-Propanediol	PRPLNGLY12
C3H8O3	Glycerol	GLYCEROL
C3H9N	Isopropylamine	IPRPYLAM
C3H9N	Propylamine	PROPYLAMN
C3H9N	Trimethylamine	TRIMEAMINE
C40H82	Tetracontane	TETRACONT
C45H92	Pentatetracontane	PENTETRCON
C4Cl6	Perchlorobutadiene	HXCL13BD
C4F8	Octafluorocyclobutane	FL8CYCBUTN
C4H10	n-Butane	C4H10
C4H10	Isobutane	ISOBUTANE
C4H10NO+1	Hydrogen morpholine ion(+1)	MORPHHION
C4H10NO2+1	Hydrogen 4-aminobutanoic acid ion(+1)	HAM4BUTNION
C4H10NO2+1	Hydrogen DL-2-aminobutyric acid ion(+1)	HDLAM2BUTION
C4H10NO2+1	Hydrogen 2-methylalanine ion(+1)	HME2ALANION
C4H10O	Butanol	BUTYALCHOL
C4H10O	Diethyl ether	EETHER
C4H10O	2-Methyl-1-Propanol	ISBUALCHOL
C4H10O	2-Methoxypropane	MEIPROETH
C4H10O	1-Methoxypropane	MEPROPETH
C4H10O	2-Butyl alcohol	SBUTYALCH
C4H10O	tert-Butyl alcohol	TTBUALCHOL
C4H10O2	1,4-Butanediol	BUTAN2HD14
C4H10O2	2,3-Butanediol	BUTAN2HD23
C4H10O2	1,2-Dimethoxyethane	MEOX2ME12
C4H10O4	1,2,3,4-Butanetetrol	ERYTHRITOL
C4H10S	1-Butanethiol	BUTYLMCPT
C4H10S	3-Thiapentane	ET2SULFD
C4H10S	Isobutanethiol	IBUTYLMCPT
C4H10S	2-Butanethiol	SBUTYLMCPT
C4H11N	1-Butanamine	BUTYLAMINE
C4H11N	N,N-Diethylamine	DIETHYLAMN
C4H11N	Isobutylamine	IBUTYLAMN
C4H11N	2-Butanamine	SECBUTYAMN
C4H11NO	2-Dimethylaminoethanol	DMEAMETL
C4H11NO	Dimethylethanolamine	ME2ETNOAMN

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C4H11NO	3-Methoxypropylamine	MOPA
C4H11NO2	N,N-Diethanolamine	DEXH
C4H11NO2	2-Aminoethoxyethanol	DGXH
C4H12N+1	Hydrogen 1-butaneamine ion(+1)	BUTYAMHION
C4H12N+1	Hydrogen N,N-diethylamine ion(+1)	DIETAHION
C4H12N+1	Hydrogen isobutylamine ion(+1)	IBUTAMHION
C4H12N+1	Hydrogen 2-butanamine ion(+1)	SECBUAHION
C4H12N2	Tetramethylenediamine	TETMEDAMN
C4H12NO+1	Hydrogen dimethylethanolamine ion(+1)	DMETAMHION
C4H12NO+1	Hydrogen 2-dimethylaminoethanol ion(+1)	HDMEAMETLION
C4H12NO+1	Hydrogen 3-methoxypropylamine ion(+1)	MOPAHION
C4H12NO2+1	Hydrogen N,N-diethanolamine ion(+1)	DEXH2ION
C4H12NO2+1	Hydrogen 2-aminoethoxyethanol ion(+1)	DGXH2ION
C4H13N2+1	Tetramethylenediammonium ion(+1)	HTETMEDAMNION
C4H14N2+2	Tetramethylenediammonium ion(+2)	H2TETMEDAMNION
C4H2O4-2	Fumaric acid ion(-2)	FUMARATEION
C4H2O4-2	Maleic acid ion(-2)	MALEICION
C4H3O4-1	Hydrogen fumaric acid ion(-1)	HFUMARATEION
C4H3O4-1	Hydrogen maleic acid ion(-1)	HMALEICION
C4H4	Vinylacetylene	VINYACETYL
C4H4HoO6+1	Holmium(III) tatrtate ion(+1)	HOTRTRTION
C4H4N4	2,3-Diaminomaleonitrile	DAMNDNTL
C4H4O	Furan	FURAN
C4H4O4	Fumaric acid	FUMARACID
C4H4O4	Maleic acid	H2MALEIC
C4H4O4-2	Succinic acid ion(-2)	SUCCNATEION
C4H4O5-2	Malic acid ion(-2)	MALICTION
C4H4O6-2	Tartrate ion(-2)	TARTRTION
C4H4S	Thiophene	THIOPHENE
C4H5Cl	2-Chloro-1,3-butadiene	CLPRENE2
C4H5ClO	2-Methyl-2-propenoyl chloride	METHACRYCL
C4H5ClO2	Methyl 2-chloro-2-propenoate	MECLACRYL2
C4H5N	Methylacrylonitrile	METACRYNTL
C4H5NO4-2	IDA ion(-2)	IDAION
C4H5NO4-2	L-Aspartic acid ion(-2)	LASPARION
C4H5O2-1	cis-Crotonic acid ion(-1)	CCROTION
C4H5O2-1	Methacrylic acid ion(-1)	MEACRLTION
C4H5O2-1	trans-Crotonic acid ion(-1)	TCROTION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C4H5O4-1	Hydrogen succinic acid ion(-1)	HSUCCNATION
C4H5O5-1	Hydrogen malic acid ion(-1)	HMALICTION
C4H5O6-1	Hydrogen tartrate ion(-1)	HTARTRTION
C4H6	1,3-Butadiene	BUDIENE13
C4H6	1,2-Butadiene	BUTADIEN12
C4H6	1-Butyne	ETACETYLEN
C4H6	2-Butyne	ME2ACETNTL
C4H6Cl2	3,4-dichloro-1-butene	CL21BUTN34
C4H6Cl2	Cis-1,4-dichloro-2-butene	CL2CBUTN14
C4H6Cl2	alpha-1,3-Dichloro-2-butene	CL2TBUYN13
C4H6Cl2	1,4-Dichloro-trans-2-butene	DCLBUTE142
C4H6Cl2O2	1,2-Dichloroethyl acetate	CLET12ACET
C4H6N2O2	Fumaramide	FUMARAMD
C4H6NO4-1	Hydrogen IDA ion(-1)	HIDAION
C4H6NO4-1	Hydrogen L-aspartic acid ion(-1)	HLASPION
C4H6O	2,5-Dihydrofuran	HYD2FURN25
C4H6O	2-Methylacrolein	METHACROLN
C4H6O	3-Butene-2-one	MEVINYLKET
C4H6O	Divinyl ether	VINY2ETHER
C4H6O2	Butynediol	BUTYNDIOL
C4H6O2	cis-Crotonic acid	CCROTAC
C4H6O2	Methacrylic acid	MEACRYLACD
C4H6O2	Methyl acrylate	MEACRYLATE
C4H6O2	trans-Crotonic acid	TCROTAC
C4H6O2	Vinyl acetate	VINYLACET
C4H6O3	Acetyl anhydride	ACETANHYD
C4H6O4	Succinic acid	H2SUCCNATE
C4H6O5	Malic acid	MALICAC
C4H6O6	L-Tartaric acid	H2TARTRT
C4H7ClO	2-Chloroethoxyethene	CLETOXETE2
C4H7ClO2	Ethyl chloroacetate	ETCLACETAT
C4H7ClO2	Isopropyl chloroformate	IPROPCLFRT
C4H7ClO2	Propyl chloroformate	PROPCLFRMT
C4H7N	Isobutyronitrile	ISBUNITRIL
C4H7N	n-Butanenitrile	NBUTYRNTL
C4H7N2O3-1	N-Glycylglycine ion(-1)	GLYGLYCNION
C4H7N2O3-1	L-Asparagine ion(-1)	LASPARGION
C4H7NO	Crotonamide	CROTONAMD
C4H7NO	2-Methylacrylamide	MEACRYAMD2

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C4H7NO4	2,2'-Iminobisacetic acid	H2IDA
C4H7NO4	L-Aspartic acid	LASPARTAC
C4H7O2-1	n-Butanoic acid ion(-1)	BUTANION
C4H8	1-Butene	BUTENE1
C4H8	cis-2-Butene	CBUTEN
C4H8	Cyclobutane	CYCBUTAN
C4H8	Isobutene	ISOBUTENE
C4H8	trans-2-Butene	TBUTEN
C4H8Cl2	1,4-Dichlorobutane	CL2BUTAN14
C4H8Cl2	2,3-Dichlorobutane	DCLBN23
C4H8Cl2O	Di(2-chloroethyl) oxide	DICLETETH2
C4H8N2O2	Succinamide	SUCCINAMD
C4H8N2O3	N-Glycylglycine	HGLYGLYCN
C4H8N2O3	L-Asparagine	LASPARAGN
C4H8N8O8	2,4,6,8H-N,N,N,N-Tetranitro-1,3,5,7-tetrazocine	HMX
C4H8NO2-1	4-Aminobutanoic acid ion(-1)	AM4BUTNION
C4H8NO2-1	DL-2-Aminobutyric acid ion(-1)	DLAM2BUTION
C4H8NO2-1	2-Methylalanine ion(-1)	ME2ALANION
C4H8NO3-1	Threonate ion(-1)	LTHREONION
C4H8NO4+1	Trihydrogen IDA ion(+1)	H3IDAION
C4H8NO4+1	Hydrogen L-aspartic acid ion(+1)	H3LASPION
C4H8O	1,2-Butene oxide	BUTOXIDE12
C4H8O	n-Butanal	BUTRALDEHY
C4H8O	Ethoxyethene	ETVINETHER
C4H8O	2-Methylpropanal	IBUTALDHYD
C4H8O	2-Butanone	MEETKETONE
C4H8O	Tetrahydrofuran	THFURAN
C4H8O2	n-Butanoic acid	BUTYRICAC
C4H8O2	Cis-2-butene-1,4-diol	C2BUY14HD2
C4H8O2	1,4-Dioxane	DIOXANEP
C4H8O2	Ethyl acetate	EACTAT
C4H8O2	Isopropyl formate	IPROPFORMT
C4H8O2	Methyl propanoate	MEPRPANATE
C4H8O2	Propyl formate	PRFORMAT
C4H8O4	Acetic acid, dimer	ACET2
C4H9Br	1-Bromobutane	BRBUTAN1
C4H9Br	2-Bromobutane	BRBUTAN2
C4H9Cl	1-Chlorobutane	CLBUTAN1

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C4H9Cl	2-Chlorobutane	SBUTYLCL
C4H9Cl	tert-Butyl chloride	TBUTYLCL
C4H9I	1-Iodobutane	IBUTAN1
C4H9N2O3+1	Dihydrogen N-glycylglycine ion(+1)	H2GLYGLYCNION
C4H9N2O3+1	Hydrogen L-asparagine ion(+1)	HLASPARGION
C4H9NO	2-Methylpropanamide	MEPROPAMD
C4H9NO	Morpholine	MORPHOLN
C4H9NO	N,N-Dimethylacetamide	NNM2ACEAMD
C4H9NO2	4-Aminobutanoic acid	AM4BUTNICD
C4H9NO2	DL-2-Aminobutyric acid	DLAM2BUTCD
C4H9NO2	2-Hydroxy-2-methylpropaneamide	H2ME2PRAMD
C4H9NO2	2-Methylalanine	ME2ALANINE
C4H9NO3	L-Threonine	LTHREONINE
C50H102	Pentacontane	PENTACONT
C55H112	Pentapentacontane	PENPENTCON
C5Cl6	Perchlorocyclopentadiene	HXCLCYPNTD
C5H10	cis-2-Pentene	C2PENTEN
C5H10	1-Pentene	C5H10
C5H10	Cyclopentane	CYCLOPNTAN
C5H10	3-Methyl-1-butene	ME1BUTEN3
C5H10	2-Methyl-2-butene	ME2BUTEN2
C5H10	2-Methyl-1-butene	ME2BUTYN2
C5H10	trans-2-Pentene	T2PENTEN
C5H10Cl2	1,5-Dichloropentane	CL2PNTAN15
C5H10Cl2O2	bis(2-Chloroethoxy)methane	BICLETOXME
C5H10N2O3	L-Glutamine	LGLUTAMINE
C5H10NO2+1	Hydrogen L-proline ion(+1)	H2LPROLINEION
C5H10NO2-1	L-Valine ion(-1)	LVALINEION
C5H10NO2-1	DL-Norvaline ion(-1)	NORVALNION
C5H10NO2S-1	DL-Methionine ion(-1)	DLMETHNION
C5H10NO2S-1	L-Methionine ion(-1)	LMETHINNION
C5H10NO3+1	Hydrogen 4-hydroxyproline ion(+1)	H2LHDPROLNION
C5H10NO4+1	Trihydrogen L-glutamic acid ion(+1)	H3LGLUTION
C5H10NO4-1	N,N-Diethanolamine carboxylate ion(-1)	DEXCO2ION
C5H10NO4-1	2-Aminoethoxyethanol carboxylate ion(-1)	DGXCO2ION
C5H10O	Cyclopentanol	CYPNTNOL
C5H10O	2-Acetylpropane	MEIPRPYKET
C5H10O	Valeric aldehyde	PENTANAL1

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C5H10O	Diethyl ketone	PENTANON3
C5H10O	2-Pentanone	PNTANON2
C5H10O2	n-Butyl formate	BUTYLFARMT
C5H10O2	Ethyl propanoate	ETPROPNAT
C5H10O2	Isobutyl formate	IBUTLFORMT
C5H10O2	Isovaleric acid	IVALERICAC
C5H10O2	Methyl n-butyrate	MENBUTYRAT
C5H10O2	2,2-Dimethylpropanoic acid	MPROPANAT2
C5H10O2	n-Pentanoic acid	NPNTANOIAC
C5H10O2	Propyl acetate	NPROPYLACT
C5H10O3	DL-Ethyl lactate	ETLACTAT
C5H11Cl	1-Chloropentane	CLPNTAN1
C5H11N2O3+1	Hydrogen L-glutamine ion(+1)	HLGLUTAMION
C5H11NO2	L-Valine	LVALINE
C5H11NO2	DL-Norvaline	NORVALINE
C5H11NO2S	DL-Methionine	HDLMETHN
C5H11NO2S	L-Methionine	HLMETHINN
C5H12	n-Pentane	C5H12
C5H12	Isopentane	IPENTAN
C5H12	Neopentane	NEOPENTANE
C5H12N2O	N,N-Diethylurea	NNDETUREA
C5H12NO2+1	Hydrogen L-valine ion(+1)	HLVALINEION
C5H12NO2+1	Hydrogen DL-norvaline ion(+1)	HNORVALNION
C5H12NO2S+1	Hydrogen DL-methionine ion(+1)	H2DLMETHNION
C5H12NO2S+1	Hydrogen l-methionine ion(+1)	H2LMETHINNION
C5H12O	2,2-Dimethyl-1-propanol	M22PRNL1
C5H12O	2-Methyl-1-butanol	M2BTNOL1
C5H12O	3-Methyl-1-butanol	M3BTNOL1
C5H12O	3-Methyl-2-butanol	M3BTNOL2
C5H12O	tert-Amyl alcohol	ME2BUTNL2
C5H12O	1-Methoxy-2-methylpropane	MEIBUTETH
C5H12O	1-Methoxybutane	MENBUTETH
C5H12O	2-Methoxybutane	MESBUTETH
C5H12O	Methyl tert-butyl ether	METBUTETHR
C5H12O	1-Pentanol	PENTANOL
C5H12O	2-Pentanol	PENTNOL2
C5H12O	3-Pentanol	PENTNOL3
C5H12O2	Neopentyl glycol	NEOPENTGLY
C5H12O4	Pentaerythritol	PNTAERYTHR

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C5H13N	n-Pentylamine	NPENTYLAMN
C5H13NO	Dimethylisopropanolamine	DMIPA
C5H13NO2	Diethanolmethylamine	MDEXH
C5H14NO+1	Hydrogen dimethylisopropanolamine ion(+1)	DMIPAHION
C5H14NO2+1	Hydrogen diethanolmethylamine ion(+1)	MDEXH2ION
C5H4O2	2-Furanaldehyde	FURFURAL
C5H4O4-2	Itaconic acid ion(-2)	ITACONTION
C5H5N	Pyridine	PYRIDINE
C5H5O4-1	Hydrogen itaconic acid ion(-1)	HITACONTION
C5H6	Cyclopentadiene	CPENTADIEN
C5H6	2-Methyl-1-butene-3-yne	ME1BUT3YN2
C5H6	1-Pentene-3-yne	PENTEN3YN1
C5H6	1-Pentene-4-yne	PENTEN4YN1
C5H6N+1	Hydrogen pyridine ion(+1)	HPYRIDINION
C5H6O4	Itaconic acid	ITACONAC
C5H6O4-2	Glutaric acid ion(-1)	GLUTARION
C5H7NO2	Biomass, autotrophic active	BUGAACTIV
C5H7NO2	Biomass, autotrophic inert	BUGAINERT
C5H7NO2	Biomass, heterotrophic active	BUGHACTIV
C5H7NO2	Biomass, heterotrophic inert	BUGHINERT
C5H7NO2	Biomass, Nitrosomonas, autotrophic active	BUGSACTIV
C5H7NO2	Biomass, Nitrosomonas, autotrophic inactive	BUGSINERT
C5H7NO2	Biomass, Nitrobacter, autotrophic active	BUGBACTIV
C5H7NO2	Biomass, Nitrobacter, autotrophic inactive	BUGBINERT
C5H7NO4-2	L-Glutamic acid ion(-2)	LGLUTION
C5H7O3-1	Levulinic acid ion(-1)	LEVULTION
C5H7O4-1	Hydrogen glutaric acid ion(-1)	HGLUTARION
C5H8	Cyclopentene	CPENTEN
C5H8	Isoprene	ISOPRENE
C5H8	3-Methyl-1,2-butadiene	ME12BUDIN3
C5H8	3-Methyl-1-butyne	ME1BUTYN3
C5H8	1,3-Pentadiene	PENTDIE132
C5H8	1,2-Pentadiene	PENTDIEN12
C5H8	1-Pentyne	PENTYN1
C5H8	cis-1,3-Pentadiene	PNTADIEN13
C5H8	1,4-Pentadiene	PNTADIEN14
C5H8	2,3-Pentadiene	PNTADIEN23

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C5H8	trans-1,3-Pentadiene	T13PNTDIEN
C5H8NO2-1	L-Proline ion(-1)	LPROLINEION
C5H8NO3-1	4-Hydroxyproline ion(-1)	LHDPROLNION
C5H8NO4-1	Hydrogen L-glutamic acid ion(-1)	HLGLUTION
C5H8O	2-Methyl-3-butyn-2-ol	MEBUTYNOL2
C5H8O	Methyl isopropenyl ketone	MEIPRPLKET
C5H8O2	3-Acetoxypropene	ALLYLACET
C5H8O2	Ethyl acrylate	ETACRYLATE
C5H8O2	Methyl methacrylate	MEMECRYLAT
C5H8O2	Vinyl propionate	NINYPRPIAT
C5H8O3	Levulinic acid	LEVULAC
C5H8O4	Glutaric acid	GLUTARAC
C5H9N2O3-1	L-Glutamine ion(-1)	LGLUTAMION
C5H9NO	1-Methyl-2-pyrrolidinone	MEPYROLIDN
C5H9NO2	L-Proline	HLPROLINE
C5H9NO3	4-Hydroxyproline	HLHDPROLN
C5H9O2-1	2,2-Dimethylpropanoic acid ion(-1)	MPROPAT2ION
C5H9O2-1	n-Pentanoic acid ion(-1)	PENTANION
C60H122	Hexacontane	HEXACONT
C65H132	Pentahexacontane	PENHEXCONT
C6Cl6	Perchlorobenzene	CL6BENZEN
C6H10	cis,trans-2,4-Hexadiene	CT24HXDIEN
C6H10	Cyclohexene	CYCLOHEXEN
C6H10	1,5-Hexadiene	HEXADIEN15
C6H10	1-Hexyne	HEXYNE1
C6H10	2-Hexyne	HEXYNE2
C6H10	3-Hexyne	HEXYNE3
C6H10	2,3-Dimethyl-1,3-butadiene	MEBU13EN23
C6H10	trans,trans-2,4-Hexadiene	TT24HXDIEN
C6H10Br2	1,4-Dibromocyclohexane	BRHXN14
C6H10Cl2	(E)-1,2-Dichlorocyclohexane	ECLCHXN12
C6H10Cl2O	3,3-Dichloromethyloxolane	CLMEOXLN33
C6H10N3+1	Hydrogen 3,3'-iminobispropanenitrile ion(+1)	IMIN33HION
C6H10N3O2+1	Hydroxide histidine ion(+1)	H2LHISTIDNION
C6H10O	Cyclohexanone	CYCLHEXNON
C6H10O	3-(2-Propeneoxy)propene	DIALLYETH
C6H10O	2-Methyl-2-penten-4-one	MEPNTON432
C6H10O2	Ethyl methacrylate	ETMEACRYL

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C6H10O2	1-Propyl acrylate	NPROPYACRT
C6H10O2	2-Oxacycloheptanone	OXCHEPNON2
C6H10O3	Propanoic anhydride	PRPIOANHYD
C6H10O4	Adipic acid	ADIPICACID
C6H11ClO	(E)-4-Chlorocyclohexanol	ECLCHXNOL4
C6H11N	N,N-Diallylamine	DIALLYLAMN
C6H11N	Hexanenitrile	HEXANNTRL
C6H11N3O2+2	Dihydrogen histidine ion(+2)	H3LHISTIDNION
C6H11NO	Cyclohexanone oxime	CHEXNNOXIM
C6H11O2-1	Hexanoic acid ion(-1)	HEXANION
C6H11O3-1	2-Hydroxycaproic acid ion(-1)	HYHEXATION
C6H12	cis-2-Hexene	C2HEXENE
C6H12	cis-3-Hexene	C3HEXENE
C6H12	1-Hexene	C6H12
C6H12	Cyclohexane	CYCLOHEXAN
C6H12	2-Ethyl-1-butene	ETBUT1EN2
C6H12	2-Methyl-1-pentene	ME1PENTNE2
C6H12	3-Methyl-1-pentene	ME1PENTNE3
C6H12	4-Methyl-1-pentene	ME1PENTNE4
C6H12	2,3-Dimethyl-1-butene	ME2BU1EN23
C6H12	3,3-Dimethyl-1-butene	ME2BU1EN33
C6H12	2,3-Dimethyl-2-butene	ME2BU2EN23
C6H12	2-Methyl-2-pentene	ME2PENTEN2
C6H12	cis-3-Methyl-2-pentene	MEC2PENTN3
C6H12	cis-4-Methyl-2-pentene	MEC2PENTN4
C6H12	Methylcyclopentane	MECPENTAN
C6H12	trans-4-Methyl-2-pentene	MET2PENTN4
C6H12	trans-2-Hexene	T2HEXENE
C6H12	trans-3-Hexene	T3HEXENE
C6H12Cl2O	2,2'-Dichlorodiisopropyl ether	CLIPROP2ET
C6H12N+1	Hydrogen N,N-diallylamine ion(+1)	HDIALLYLION
C6H12NO2-1	6-Aminohexanoic acid ion(-1)	AMCAPRION
C6H12NO2-1	DL-Isoleucine ion(-1)	DLILEUCNION
C6H12NO2-1	L-Isoleucine ion(-1)	LILEUCNION
C6H12NO2-1	L-Leucine ion(-1)	LLEUCINION
C6H12NO2-1	DL-Norleucine ion(-1)	NORLEUCION
C6H12O	1-(Ethenyloxy)-butane	BUTVNYETH
C6H12O	Cyclohexanol	CHXANOL
C6H12O	Ethyl isopropyl ketone	ETIPROPKET

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C6H12O	1-Hexanal	HEXANAL1
C6H12O	3-Hexanone	HEXANON3
C6H12O	2-Hexanone	HEXANONE2
C6H12O	4-Methyl-2-pentanone	M4PNTON2
C6H12O	3,3-Dimethyl-2-butanone	ME2BU2ON33
C6H12O	3-Methylpentan-2-one	MEPNTN2ON3
C6H12O2	1-Butyl acetate	BUTLACETAT
C6H12O2	4-Methyl-2-pentanon-4-ol	DIACETNALC
C6H12O2	2-Ethylbutyric acid	ETBUTYRAC2
C6H12O2	Ethyl 2-methylpropanoate	ETIBUTYRAT
C6H12O2	Ethyl n-butanoate	ETNBUTYRAT
C6H12O2	Caproic acid	HXNOICACID
C6H12O2	Isobutyl acetate	IBUTYLACET
C6H12O2	n-Pentyl formate	NPENTYLFMT
C6H12O2	Propyl propionate	NPROPPROPT
C6H12O2	sec-Butyl acetate	SECBUTACET
C6H12O2	tert-Butyl acetate	TTBUTACETT
C6H12O3	2-Hydroxycaproic acid	HYCAPRICAC
C6H12O3	Paracetaldehyde	PARALD
C6H12O6	beta-D-Fructose	FFURANOS
C6H12O6	Levulose	FPYRANOS
C6H12O6	D-Glucose	GLUCOS
C6H12O6	alpha-D-Glucose	ADGLUC
C6H12O6	beta-D-Glucose	BDGLUC
C6H12O6	beta-D-Fructose	BDFRUC
C6H12O6.H2O	alpha-D-Glucose monohydrate	ADGLUC.H2O
C6H13Cl	1-Chloro-n-hexane	CLHXANE1
C6H13N4O2-1	L-Arginine ion(-1)	LARGINION
C6H13NO2	6-Aminohexanoic acid	AMCAPRACD
C6H13NO2	DL-Isoleucine	DLILEUCINE
C6H13NO2	L-Isoleucine	LILEUCINE
C6H13NO2	L-Leucine	LLEUCINE
C6H13NO2	DL-Norleucine	NORLEUCINE
C6H14	n-Hexane	C6H14
C6H14	2,2-Dimethylbutane	ME2BUTAN22
C6H14	2,3-Dimethylbutane	ME2BUTAN23
C6H14	2-Methylpentane	MEPENTAN2
C6H14	3-Methylpentane	MEPENTAN3
C6H14N4O2	L-Arginine	LARGININE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C6H14NO2+1	Hydrogen 6-aminohexanoic acid ion(+1)	HAMCAPRION
C6H14NO2+1	Hydrogen DL-isoleucine ion(+1)	HDLILEUCNION
C6H14NO2+1	Hydrogen L-isoleucine ion(+1)	HLILEUCNION
C6H14NO2+1	Hydrogen L-leucine ion(+1)	HLLEUCINION
C6H14NO2+1	Hydrogen DL-norleucine ion(+1)	HNORLEUCION
C6H14O	2-Isopropoxypropane	DIPROPETH
C6H14O	n-Propyl ether	DNPROPETH
C6H14O	2-Ethyl-1-butanol	ET1BUTNOL2
C6H14O	1-Hexanol	HEXANOL
C6H14O	2-Hexanol	HEXNOL2
C6H14O	4-Methyl-2-pentanol	M4PTNOL2
C6H14O	2-Methyl-1-pentanol	ME1PNTNOL2
C6H14O	1-Methoxypentane	MENPENTETH
C6H14O	n-Butyl ethyl ether	NBUTETETHE
C6H14O	tert-Butyl ethyl ether	TTBUTETETH
C6H14O	Butane, 2-methoxy-2-methyl-	TTPENTYETH
C6H14O2	1,1-Diethoxyethane	ACETAL
C6H14O2	2-Butoxyethanol	BUTOXETNL2
C6H14O2	1,2-Diethoxyethane	DIETOXTN12
C6H14O2	1,6-Hexanediol	HEXANIOL16
C6H14O3	bis(2-Methoxyethyl) ether	ETLN2GLM2E
C6H14O3	Trimethylolpropane	TMEPROPAN
C6H14O6	Galactitol	GALACTITOL
C6H14O6	Mannitol	MANNITOL
C6H14O6	Sorbitol	SORBITOL
C6H15N	Diisopropylamine	DIIPROPAMN
C6H15N	n-Dipropylamine	DPRAMINE
C6H15N	n-Hexylamine	NHEXYLAMN
C6H15N	Triethylamine	TRIEAMINE
C6H15N4O2+1	Hydrogen L-arginine ion(+1)	HLARGINION
C6H15NO2	Diisopropanolamine	DIPXH
C6H15NO3	Triethanolamine	TEXH
C6H16N+1	Hydrogen diisopropylamine ion(+1)	DIIPRAMHION
C6H16N+1	Hydrogen n-dipropylamine ion(+1)	DPRAMHION
C6H16N+1	Hydrogen n-hexylamine ion(+1)	HNHEXYLAMION
C6H16N+1	Hydrogen triethylamine ion(+1)	TETHAMHION
C6H16N2	Hexamethylenediamine	MELN6AMN2
C6H16N4O2+2	Dihydrogen L-arginine ion(+2)	H2LARGINION
C6H16NO2+1	Hydrogen diisopropylamine ion(+1)	DIPXH2ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C6H16NO3+1	Hydrogen triethanolamine ion(+1)	TEXH2ION
C6H17N2+1	Hydrogen hexamethylenediamine ion(+1)	HMELN6AION
C6H2Cl4	1,2,4,5-Tetrachlorobenzene	CLBNZ1245
C6H2Cl4O	2,3,4,6-Tetrachlorophenol	CLPHEN2346
C6H2Cl4O	2,3,5,6-Tetrachlorophenol	CLPHEN2356
C6H3Cl3	1,3,5-Trichlorobenzene	CL3BNZ135
C6H3Cl3	1,2,3-Trichlorobenzene	CLBNZ123
C6H3Cl3	1,2,4-Trichlorobenzene	TCLBNZ124
C6H3Cl3O	2,3,5-Trichlorophenol	CLPHENL235
C6H3Cl3O	2,3,6-Trichlorophenol	CLPHENL236
C6H3Cl3O	2,4,5-Trichlorophenol	CLPHENL245
C6H3Cl3O	2,4,6-Trichlorophenol	CLPHENL246
C6H3Cl3O	3,4,5-Trichlorophenol	CLPHENL345
C6H3N3O7	2,4,6-Trinitrophenol	PICRICAC
C6H4Br2	m-Dibromobenzene	MBR2BNZ
C6H4Br3N	2,4,6-Tribromoaniline	BRANILN246
C6H4BrCl	2-Bromochlorobenzene	BRCL2BNZ
C6H4BrCl	1-Bromo-3-chlorobenzene	BRCLBNZ3
C6H4Cl2	m-Dichlorobenzene	MDCLBNZN
C6H4Cl2	o-Dichlorobenzene	ODCLBNZN
C6H4Cl2	p-Dichlorobenzene	PDCLBNZN
C6H4Cl2O	2,4-Dichlorophenol	CLPHENOL24
C6H4Cl2O	2,6-Dichlorophenol	CLPHENOL26
C6H4ClNO2	m-Chloronitrobenzene	MCLNITBNZ
C6H4ClNO2	o-Chloronitrobenzene	OCLNITBNZ
C6H4ClNO2	1-Chloro-4-nitrobenzene	PCLNITBNZ
C6H4N2O4	1,4-Dinitrobenzene	DINITBNZ14
C6H4N2O4	m-Dinitrobenzene	MNIT2BNZ
C6H4N2O4	o-Dinitrobenzene	ONIT2BNZ
C6H4N2O5	2,4-Dinitrophenol	NIPHENOL24
C6H4N2O5	2,5-Dinitrophenol	NIPHENOL25
C6H4N2O5	2,6-Dinitrophenol	NIPHENOL26
C6H4NO2-1	Nicotinic acid ion(-1)	NICOTACDION
C6H4O2	1,4-Benzoquinone	QUINON
C6H4O2-2	1,2-Benzenediol ion(-2)	BZDIOL12ION
C6H4O2-2	1,3-Benzenediol ion(-2)	BZDIOL13ION
C6H4O2-2	1,4-Benzenediol ion(-2)	BZDIOL14ION
C6H5Br	Bromobenzene	BRBENZEN

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C6H5BrO	2-Bromophenol	BRPHENOL2
C6H5Cl	Chlorobenzene	CLBENZEN
C6H5Cl2N	3,4-Dichloroaniline	CL2ANILN34
C6H5Cl2N	2,3-Dichlorobenzenamine	CLANILIN23
C6H5Cl2N	2,4-Dichlorobenzenamine	CLANILIN24
C6H5ClO	m-Chlorophenol	MCLPHENOL
C6H5ClO	o-Chlorophenol	OCLPHENOL
C6H5ClO	p-Chlorophenol	PCLPHENOL
C6H5F	Fluorobenzene	FBENZENE
C6H5I	Iodobenzene	IBENZENE
C6H5IO	4-Iodophenol	IPHENOL4
C6H5N3O4	2,4-Dinitroaniline	DNITANIL24
C6H5NO2	Nicotinic acid	HNICOTACD
C6H5NO2	Nitrobenzene	NITBNZ
C6H5NO3	2-Nitrophenol	NITPHENOL2
C6H5NO3	3-Nitrophenol	NITPHENOL3
C6H5NO3	4-Nitrophenol	NITPHENOL4
C6H5O-1	Phenol ion(-1)	C6H5OION
C6H5O2-1	Hydrogen 1,2-benzenediol ion(-1)	HBZDIOL12ION
C6H5O2-1	Hydrogen 1,3-benzenediol ion(-1)	HBZDIOL13ION
C6H5O2-1	Hydrogen 1,4-Benzenediol ion(-1)	HBZDIOL14ION
C6H5O7-3	Citrate ion(-3)	CITRATION
C6H6	Benzene	BENZENE
C6H6Cl6	1,2,3,4,5,6-Hexachlorocyclohexane	ALPHABHC
C6H6Cl6	beta-1,2,3,4,5,6-Hexachlorocyclohexane	BETABHC
C6H6Cl6	1,2,3,4,5,6-Hexachlorocyclohexane	DELTABHC
C6H6Cl6	1,2,3,4,5,6-Hexachlorocyclohexane	LINDANE
C6H6ClN	o-Chloroaniline	CLANLN2
C6H6ClN	m-Chloroaniline	CLANLN3
C6H6ClN	1-Amino-4-chlorobenzene	CLANLN4
C6H6N2O2	2-Nitraniline	NITANL2
C6H6N2O2	m-Nitroaniline	NITANL3
C6H6N2O2	4-Nitroaniline	NITANLINEP
C6H6N3O4+1	Hydrogen 2,4-dinitroaniline ion(+1)	HDNITANIL24ION
C6H6NO2+1	Hydrogen nicotinic acid ion(+1)	H2NICOTACDION
C6H6NO6-3	NTA ion(-3)	NTAION
C6H6O	Phenol	C6H5OH
C6H6O2	1,2-Benzenediol	BNZDIOL12
C6H6O2	1,3-Benzenediol	BNZDIOL13

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C6H6O2	1,4-Benzenediol	HYDRQUINON
C6H6O7-2	Hydrogen citrate ion(-2)	HCITRATION
C6H7N	Aniline	ANILINE
C6H7O7-1	Dihydrogen citrate ion(-1)	H2CITRATION
C6H8	1,3-Cyclohexadiene	CHEXDIEN13
C6H8	Methylcyclopentadiene	MECPENTD
C6H8N2	m-Phenylenediamine	MPHEENAMN2
C6H8N2	o-Phenylenediamine	OPHENLNAM2
C6H8N2	1,4-Phenylenediamine	PHENDIAMNP
C6H8N3O2-1	Histidine ion(-1)	LHISTIDNION
C6H8O	3-Methyl-2-cyclopentene-1-one	ME3CPENTEN
C6H8O4-2	Adipic acid ion(-2)	ADIPATION
C6H8O7	Citric acid	CITRAC
C6H8O7.1H2O	Citric acid monohydrate	CITRAC.1H2O
C6H9N3	3,3'-Iminobispropanenitrile	IMIN33PRNL
C6H9N3O2	Histidine	HLHISTIDN
C6H9NO6	Nitrilotriacetic acid	H3NTA
C6H9O4-1	Hydrogen adipic acid ion(-1)	HADIPATION
C6HCl5	Pentachlorobenzene	CL5BNZ
C6HCl5O	Pentachlorophenol	CL5PHENOL
C70H142	Heptacontane	HEPTCONT
C75H152	Pentaheptacontane	PENHEPTAC
C7H10	2-Norbornene	NORBORNEN2
C7H10O2	Allyl methacrylate	ALLYMEACRT
C7H10O4-2	Pimelic acid ion(-2)	PIMELATION
C7H11O4-1	Hydrogen pimelic acid ion(-1)	HPIMELATION
C7H12	Cycloheptene	CHEPTEN
C7H12O2	n-Butyl acrylate	BUTACRYLAT
C7H12O2	Isobutyl acrylate	IBUACRYLAT
C7H12O2	Cyclohexanecarboxylic acid	NAPHTHENAC
C7H12O2	Propyl methacrylate	PROMEACRL
C7H12O4	Pimelic acid	PIMELICAC
C7H13O2-1	Heptanoic acid ion(-1)	HEPTANION
C7H14	1-Heptene	C7H14
C7H14	Cycloheptane	CHEPTAN
C7H14	cis-2-Heptene	CHEPTEN2
C7H14	cis-3-Heptene	CHEPTEN3
C7H14	cis-1,2-Dimethylcyclopentane	CMECPENT12
C7H14	cis-1,3-Dimethylcyclopentane	CMECPENT13

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C7H14	Ethylcyclopentane	ETCPENTAN
C7H14	2-Ethyl-1-pentene	ETPENTEN2
C7H14	3-Ethyl-1-pentene	ETPENTEN3
C7H14	2,3,3-Trimethyl-1-butene	MEBUTEN233
C7H14	1,1-Dimethylcyclopentane	MECHEPTN11
C7H14	Methylcyclohexane	MECHEXAN
C7H14	2-Methyl-1-hexene	MEHEXEN2
C7H14	3-Methyl-1-hexene	MEHEXEN3
C7H14	4-Methyl-1-hexene	MEHEXEN4
C7H14	trans-2-Heptene	THEPTEN2
C7H14	trans-3-Heptene	THEPTEN3
C7H14	trans-1,2-Dimethylcyclopentane	TMECPENT12
C7H14	trans-1,3-Dimethylcyclopentane	TMECPENT13
C7H14NO4-1	Diisopropanolamine carboxylate ion(-1)	DIPXCO2ION
C7H14O	cis-2-Methylcyclohexanol	CMECHXOL2
C7H14O	cis-3-Methylcyclohexanol	CMECHXOL3
C7H14O	cis-4-Methylcyclohexanol	CMECHXOL4
C7H14O	Heptanal	HEPTANAL1
C7H14O	2-Heptanone	HEPTANON2
C7H14O	3-Heptanone	HEPTANON3
C7H14O	4-Heptanone	HEPTANON4
C7H14O	1-Methylcyclohexanol	MECHXOL1
C7H14O	2-Methylhexanal	MEHEXANAL2
C7H14O	3-Methylhexanal	MEHEXANAL3
C7H14O	5-Methyl-2-hexanone	MEHXON5
C7H14O	2,4-Dimethyl-3-pentanone	MEPENTON24
C7H14O	trans-2-Methylcyclohexanol	TMECHXOL2
C7H14O	trans-3-Methylcyclohexanol	TMECHXOL3
C7H14O	trans-4-Methylcyclohexanol	TMECHXOL4
C7H14O2	Butyl propanoate	BUPROPIONT
C7H14O2	Heptanoic acid	HPNOICACID
C7H14O2	Isopentyl acetate	ISAMYACET
C7H14O2	Ethyl isovalerate	IVALERAT
C7H14O2	1-Pentyl acetate	PENTYLACET
C7H14O2	Propyl n-butyrate	PROBUTYRAT
C7H14O2	sec-Amyl acetate	SECAMLAC
C7H14O2	2,3-Dimethylpropylacetate	TTAMYLACET
C7H14O3	Ethyl-3-ethoxypropanoate	ETETOXPRT3
C7H15Br	1-Bromoheptane	BRHEPTAN1

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C7H16	n-Heptane	C7H16
C7H16	3-Ethylpentane	ETPENTAN3
C7H16	2,2,3-Trimethylbutane	MEBUTAN223
C7H16	2-Methylhexane	MEHXAN2
C7H16	3-Methylhexane	MEHXAN3
C7H16	2,2-Dimethylpentane	MEPENTAN22
C7H16	2,3-Dimethylpentane	MEPENTAN23
C7H16	2,4-Dimethylpentane	MEPENTAN24
C7H16	3,3-Dimethylpentane	MEPENTAN33
C7H16O	1-Heptanol	HEPTANOL
C7H16O	2-Heptanol	HEPTANOL2
C7H16O	5-Methyl-1-hexanol	ME5HXOL1
C7H17N	1-Heptanamine	HEPTYLAMN
C7H18N+1	Hydrogen 1-Heptanamine ion(+1)	HHEPTYLION
C7H3Br2NO	3,5-Dibromo-4-hydroxybenzonitrile	BROMOXYNIL
C7H3Cl2N	2,6-Dichlorobenzonitrile	DICHLBENIL
C7H4Cl2O	m-Chlorobenzoyl chloride	MCLBNZYLCL
C7H4Cl2O2	3,4-Dichlorobenzoic acid	CLBNZAC34
C7H4O3-2	m-Salicylic acid ion(-2)	MSALICYLION
C7H4O3-2	Salicylic acid ion(-2)	OSALICYLION
C7H4O3-2	p-Salicylic acid ion(-2)	PSALICYLION
C7H5Cl2NO2	3-Amino-2,5-dichlorobenzoic acid	CHLORAMBEN
C7H5Cl3	alpha,alpha,alpha-Trichlorotoluene	BNZTRICL
C7H5ClO2	3-Chlorobenzoic acid	CLBNZAC3
C7H5ClO2	o-Chlorobenzoic acid	OCLBNZICAC
C7H5N	Benzonitrile	BNZONITRIL
C7H5N3O6	2,4,6-Trinitrotoluene	NITOLUN246
C7H5N5O8	N-Methyl-N,2,4,6-tetranitroaniline	TETRYL
C7H5O2-1	Benzoic acid ion(-1)	BENZOATION
C7H5O3-1	Hydrogen m-salicylic acid ion(-1)	HMSALICYLION
C7H5O3-1	Hydrogen salicylic acid ion(-1)	HOSALICYLION
C7H5O3-1	Hydrogen p-salicylic acid ion(-1)	HPSALICYLION
C7H6Cl2	alpha,alpha-Dichlorotoluene	BNZYLDICL
C7H6Cl2	3,4-Dichlorotoluene	CLMEBNZ234
C7H6Cl2	2,4-Dichlorotoluene	DICLTOLU24
C7H6N2O4	2,4-Dinitrotoluene	NITOLUEN24
C7H6N2O4	2,5-Dinitrotoluene	NITOLUEN25
C7H6N2O4	2,6-Dinitrotoluene	NITOLUEN26
C7H6N2O4	3,4-Dinitrotoluene	NITOLUEN34

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C7H6N2O4	3,5-Dinitrotoluene	NITOLUEN35
C7H6NO2-1	2-Aminobenzoic acid ion(-1)	AM2BNZATION
C7H6O	Benzaldehyde	BNZALDEHYD
C7H6O2	Benzoic acid	BNZACID
C7H6O2	4-Hydroxybenzaldehyde	HDBNZALD4
C7H6O3	m-Salicylic acid	MSALICYLAC
C7H6O3	p-Salicylic acid	PSALICYLAC
C7H6O3	Salicylic acid	SALICYLAC
C7H7Br	4-Bromotoluene	BRTOLUEN4
C7H7Cl	Benzyl chloride	BENZYLCL
C7H7Cl	2-Chlorotoluene	CLTOLUENEO
C7H7Cl	4-Chlorotoluene	CLTOLUENEP
C7H7ClO	4-Chloro-3-methylphenol	CL4ME3PHNL
C7H7NO	Benzoylamide	BNZAMID
C7H7NO2	2-Aminobenzoic acid	HAM2BNZAT
C7H7NO2	m-Nitrotoluene	NITTOLUNEM
C7H7NO2	2-Nitrotoluene	NITTOLUNEO
C7H7NO2	4-Nitrotoluene	NITTOLUNEP
C7H7NO3	2-Nitroanisole	NITANISOL2
C7H8	Toluene	TOLUENE
C7H8ClN	5-Chloro-2-methylbenzenamine	CL5M2BNZAM
C7H8N2O2	3,5-Diaminobenzoic acid	DAMBNZIC35
C7H8NO2+1	Hydrogen 2-aminobenzoic acid ion(+1)	H2AM2BNZATION
C7H8O	Methoxybenzene	ANISOLE
C7H8O	alpha-Hydroxytoluene	BNZYLALCHL
C7H8O	m-Cresol	MCRESOLE
C7H8O	o-Cresol	OCRESOLE
C7H8O	p-Cresol	PCRESOLE
C7H8O2	2-Methoxyphenol	GUAIACOL
C7H8O2	4-Methoxyphenol	MEOXPHENLP
C7H9N	alpha-Hydroxytoluene	BNZYLAMN
C7H9N	3-Toluidine	MTOLUIDINE
C7H9N	o-Toluidine	TOLUIDINEO
C7H9N	p-Toluidine	TOLUIDINEP
C80H162	Octacontane	OCTACONT
C8H10	Ethylbenzene	ETBNZ
C8H10	1,3-Dimethylbenzene	MXYLENE
C8H10	o-Xylene	OXYLENE
C8H10	1,4-Dimethylbenzene	PXYLENE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C8H10NO2+1	Hydrogen 2-(methylamino)benzoic acid ion(+1)	H2MAMBNZACION
C8H10O	2,3-Xylenol	DIMEPHNL23
C8H10O	2,4-Xylenol	DIMEPHNL24
C8H10O	2,5-Xylenol	DIMEPHNL25
C8H10O	2,6-Xylenol	DIMEPHNL26
C8H10O	4-Ethylphenol	ETPHENOLP
C8H10O	sec-Phenethyl alcohol	ETPHENYL1
C8H10O	2-Methylbenzyl alcohol	MEBNZYAMD2
C8H10O	3-Ethylphenol	METPHENOL
C8H10O	2-Ethylphenol	OETPHENOL
C8H10O	2-Phenylethanol	PHEETNOL2
C8H10O	Phenetole	PHENETOL
C8H10O	3,4-Xylenol	XYLENOL34
C8H10O	3,5-Xylenol	XYLENOL35
C8H10O2	4-Ethyl-1,3-dihydroxybenzene	ETRESORCNL
C8H10O2	1,4-Dimethoxybenzene	MEOXBNZ14
C8H10O2	2-Phenoxyethanol	PHENOXETL2
C8H10O2	1,2-Dimethoxybenzene	VERATROL
C8H10O3	3,4-Dimethoxyphenol	MEOXPHEN34
C8H10O4	Ethylene diacrylate	GLYDIACRYL
C8H11N	2-Ethylaniline	ETANILIN2
C8H11N	2,4,6-Trimethylpyridine	MPYRIDN246
C8H11NO	2-Methoxy-5-methylbenzenamine	PCRESIDINE
C8H11NO	p-Phenetidine	PPHENETID
C8H12	1,5-cyclooctadiene	COCTDIEN15
C8H12	Vinylcyclohexene	VINYLCHXEN
C8H12O4	Diethyl maleate	DETMALEAT
C8H12O4	2-Methyl-2-propene-1,1-dioldiacetate	MEACROLACT
C8H12O4-2	Suberic acid ion(-2)	SUBERATION
C8H13O4-1	Hydrogen suberic acid ion(-1)	HSUBERATION
C8H14	Cyclooctene	COCTENE
C8H14O2	n-Butyl methacrylate	BUMEACRYL
C8H14O3	Butyric anhydride	BUTYRANHD
C8H14O4	Diethyl succinate	DETSUCCINT
C8H14O4	Suberic acid	SUBERICAC
C8H15O2-1	Octanoic acid ion (-1)	OCTANION
C8H16	1-Octene	C8H16
C8H16	Cyclooctane	CCYCOCTAN

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C8H16	cis-1,2-Dimethylcyclohexane	CMECHEXN12
C8H16	cis-1,3-Dimethylcyclohexane	CMECHEXN13
C8H16	cis-1,4-Dimethylcyclohexane	CMECHEXN14
C8H16	Ethylcyclohexane	ETCYCLHEXN
C8H16	2-Ethyl-1-hexene	ETHEX1EN2
C8H16	Isopropylcyclopentane	IPROCPENTN
C8H16	1,1-Dimethylcyclohexane	MECHEXN11
C8H16	1-Methyl-1-ethylcyclopentane	MEETCPEN11
C8H16	2,4,4-Trimethyl-1-pentene	MEPNTEN244
C8H16	2,4,4-Trimethyl-2-pentene	MPEN2EN244
C8H16	Propylcyclopentane	PROCPENTAN
C8H16	trans-1,2-Dimethylcyclohexane	TMECHEXN12
C8H16	trans-1,3-Dimethylcyclohexane	TMECHEXN13
C8H16	trans-1,4-Dimethylcyclohexane	TMECHEXN14
C8H16	trans-2-Octene	TOCTEN2
C8H16	trans-3-Octene	TOCTEN3
C8H16O	2-Ethylhexanal	ETHEXAL2
C8H16O	Octanal	OCTANAL1
C8H16O	2-Octanone	OCTANON2
C8H16O2	n-Butyl n-butyrate	BUBUTYRAT
C8H16O2	n-Hexyl acetate	HEXYLACET
C8H16O2	Isobutyl isobutyrate	IBUIBUYRAT
C8H16O2	Octanoic acid	OCTANOICAC
C8H16O4	2-(2-Ethoxyethoxy)ethyl acetate	DEGEEACET
C8H18	n-Octane	C8H18
C8H18	3-Ethylhexane	ETHXAN3
C8H18	2-Methyl-3-ethylpentane	ME2ET3PNTN
C8H18	3-Methyl-3-ethylpentane	ME3ET3PNTN
C8H18	2,2,3,3-Tetramethylbutane	MEBUTN2233
C8H18	2-Methylheptane	MEHPTAN2
C8H18	3-Methylheptane	MEHPTAN3
C8H18	4-Methylheptane	MEHPTAN4
C8H18	2,2-Dimethylhexane	MEHXAN22
C8H18	2,3-Dimethylhexane	MEHXAN23
C8H18	2,4-Dimethylhexane	MEHXAN24
C8H18	2,5-Dimethylhexane	MEHXAN25
C8H18	3,3-Dimethylhexane	MEHXAN33
C8H18	3,4-Dimethylhexane	MEHXAN34
C8H18	2,2,3-Trimethylpentane	MEPNTAN223

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C8H18	2,2,4-Trimethylpentane	MEPNTAN224
C8H18	2,3,3-Trimethylpentane	MEPNTAN233
C8H18	2,3,4-Trimethylpentane	MEPNTAN234
C8H18O	DI-n-Butyl ether	DIBUETHER
C8H18O	Di-tert-butyl ether	DITTBUETH
C8H18O	2,2'-Oxybisbutane	DSECBUETH
C8H18O	2-Ethyl-1-hexanol	ET2HXNOL1
C8H18O	1-Octanol	OCTANOL1
C8H18O	2-Octanol	OCTANOL2
C8H18O2	2-Hexyloxy-1-ethanol	HEXYLOXTOL
C8H18O3	bis(2-Ethoxyethyl) ether	DETGLYDEET
C8H18O3	Dipropylene glycol methyl ether	PROGLIMETH
C8H18O4	2,5,8,11-Tetraoxadodecane	TGLYDMETH
C8H19N	Di-n-Butylamine	DIBUTYAMN
C8H19N	Diisobutylamine	DIIBUAMN
C8H19N	n-Octylamine	NOCTYLAMN
C8H20N+1	Hydrogen di-n-butylamine ion(+1)	HDIBUTAMION
C8H20N+1	Hydrogen diisobutylamine ion(+1)	HDIIBUAMION
C8H20N+1	Hydrogen n-octylamine ion(+1)	HOCTYLION
C8H4Cl2O2	1,3-Benzenedicarbonyl chloride	IPHTHAYLCL
C8H4O3	Phthalic anhydride	PHTHANHYDR
C8H4O4-2	Isophthalic acid ion(-2)	IPHTHTION
C8H4O4-2	Phthalic acid ion(-2)	PHTHLTION
C8H4O4-2	Terephthalic acid ion(-2)	TPHTHTION
C8H5Cl3O3	(2,4,5-Trichlorophenoxy)acetic acid	TACETAC245
C8H5O4-1	Hydrogen isophthalic acid ion(-1)	HIPHTHTION
C8H5O4-1	Hydrogen phthalic acid ion(-1)	HPHTHLTION
C8H5O4-1	Hydrogen terephthalic acid ion(-1)	HTPHTHTION
C8H6	Ethynylbenzene	ETHYNYLBNZ
C8H6Cl2O3	3,6-Dichloro-2-methoxybenzoic acid	DICAMBA
C8H6Cl2O3	2,4-Dichlorophenoxyacetic acid	DPHEOXAC24
C8H6O	Benzofuran	BNZFURAN
C8H6O2	1-Phthalanone	PHTHALID
C8H6O4	Isophthalic acid	IPHTHALAC
C8H6O4	Phthalic acid	PHTHALACID
C8H6O4	Terephthalic acid	TERPHTHAAC
C8H7ClO	2-Chloroacetophenone	CLACEPHENN
C8H7N	Phenylacetonitrile	PHENACENTL
C8H7O2-1	3-Methylbenzoic acid ion(-1)	MTOLUION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C8H7O2-1	o-Toluic acid ion(-1)	OTOLUION
C8H7O2-1	p-Toluylic acid ion(-1)	PTOLUION
C8H7O3-1	Phenoxyacetic acid ion(-1)	PHOXACION
C8H8	Phenylethene	STYRENE
C8H8NO2-1	2-(Methylamino)benzoic acid ion(-1)	MAMBNZACION
C8H8O	1-Phenyl-1-ethanone	ACETPHENON
C8H8O	2,3-Dihydrobenzofuran	HDBNZFUR23
C8H8O	4-Tolualdehyde	PTOLUALD
C8H8O	Styrene oxide	STYRENOX
C8H8O2	Benzeneacetic acid	BNZACETAC
C8H8O2	Methyl benzoate	MEBENZOATE
C8H8O2	3-Methylbenzoic acid	MTOLUICAC
C8H8O2	p-Toluylic acid	PTOLUICAC
C8H8O2	o-Toluic acid	TOLUCACIDO
C8H8O3	2-(Methoxycarbonyl)phenol	MESALICYL
C8H8O3	Phenoxyacetic acid	PHOXACAC
C8H9NO	N-Phenylacetamide	ACETANILID
C8H9NO	2-Phenylacetamide	PHENACEAMD
C8H9NO2	2-(Methylamino)benzoic acid	HMAMBNZAC
C9H10	3-Phenyl-1-propene	ALLYLBNZ
C9H10	2-Phenyl-1-propene	ALMESTYREN
C9H10	cis-1-Propenylbenzene	CPROYLBNZ
C9H10	Indan	INDAN
C9H10	1-Ethenyl-2-methylbenzene	MESTYRENEO
C9H10	1-Methyl-3-ethenylbenzene	MMESTYREN
C9H10	p-Methylstyrene	PMESTYREN
C9H10	trans-1-Propenylbenzene	TPROYLBNZ1
C9H10Cl2N2O	1,1-Dimethyl-3-(3,4-dichlorophenyl)urea	DIURON
C9H10NO2-1	DL-3-Phenylalanine ion(-1)	DLPHALION
C9H10NO2-1	L-Phenylalanine ion(-1)	LPHEALION
C9H10NO3-1	Hydrogen L-tyrosine ion(-1)	HLTYROSNION
C9H10O	1-Phenyl-1-propanone	PROPIOPHEN
C9H10O2	alpha-Acetoxytoluene	BNZYLACET
C9H10O2	Ethyl benzoate	ETBENZOAT
C9H10O2	Methyl p-toluate	ME4MEBNZAT
C9H10O2	2,4-Dimethylbenzoic acid	MEBNZAC24
C9H10O2	2,5-Dimethylbenzoic acid	MEBNZAC25
C9H10O2	3,4-Dimethylbenzoic acid	MEBNZAC34
C9H10O2	3,5-Dimethylbenzoic acid	MEBNZAC35

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C9H10O2	3-Phenylpropionic acid	PHENPROPAC
C9H11NO2	DL-3-Phenylalanine	DLPHENLALN
C9H11NO2	L-Phenylalanine	LPHENLALAN
C9H11NO3	L-Tyrosine	LTYROSINE
C9H12	Isopropylbenzene	CUMENE
C9H12	4-Ethyltoluene	ETTOLUENEP
C9H12	2-Ethyltoluene	MEETBNZ12
C9H12	m-Ethyltoluene	MEETBNZ13
C9H12	1,3,5-Trimethylbenzene	MESITYLENE
C9H12	Propylbenzene	PROPYLBNZ
C9H12	1,2,3-Trimethylbenzene	TMEBNZ123
C9H12	1,2,4-Trimethylbenzene	TMEBNZ124
C9H12	Vinylnorbornene	VYNOBORNN
C9H12NO2+1	Hydrogen DL-3-phenylalanine ion(+1)	HDLPHALION
C9H12NO2+1	Hydrogen L-phenylalanine ion(+1)	HLPHEALION
C9H12NO3+1	Hydrogen L-tyrosine ion(+1)	H3LTYROSNION
C9H12O	Benzyl ethyl ether	BNZLETETH
C9H12O	2-Isopropylphenol	IPROPPHEN2
C9H12O	3-Isopropylphenol	IPROPPHEN3
C9H12O	4-Isopropylphenol	IPROPPHEN4
C9H12O	2-Phenyl-2-propanol	PHE2PROOL2
C9H12O	3-Phenyl-1-propanol	PHENPROTL3
C9H12O	2,3,5-Trimethylphenol	TMPHENL235
C9H12O	2,4,5-Trimethylphenol	TMPHENL245
C9H12O	2,4,6-Trimethylphenol	TMPHNOL246
C9H12O	3,4,5-Trimethylphenol	TMPHNOL345
C9H12O3	1,2,3-Trimethoxybenzene	TMOXBNZ123
C9H13N	1-Phenyl-2-aminopropane	AMPHETAMN
C9H13N	2,4,5-Trimethylaniline	TMANILN245
C9H13N	2,4,6-Trimethylbenzenamine	TMEANLN246
C9H14O	Isophoron	ISOPHORONE
C9H14O	2,6-Dimethyl-2,5-heptadiene-4-one	MEHEPENON
C9H14O4-2	Azelate ion(-2)	AZELATION
C9H15O4-1	Hydrogen azelate ion(-1)	HAZELATION
C9H16O4	Azelaic acid	AZELAICAC
C9H17O2-1	Nonanoic acid ion(-1)	NONANION
C9H18	(1-Methylethyl)cyclohexane	IPROCHXAN
C9H18	n-Butylcyclopentane	NBUCPENTEN
C9H18	1-Nonene	NONEN1

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C9H18	Propylcyclohexane	NPROCHEXN
C9H18O	Diisobutyl ketone	DIIBUKETON
C9H18O	1-Nonanal	NONANAL1
C9H18O	2-Nonanone	NONANON2
C9H18O	5-Nonanone	NONANON5
C9H18O	2,2,4,4-Tetramethyl-3-pentanone	TMPENN2244
C9H18O2	Butyl-3-methylbutanoate	BUTIVALERT
C9H18O2	n-Butyl valerate	BUVALERAT
C9H18O2	Methyl octanoate	MEOCTAT
C9H18O2	Nonanoic acid	NONOICACID
C9H18O2	n-Octyl formate	OCTYLFMT
C9H20	n-Nonane	C9H20
C9H20	3,3-Diethylpentane	DETPENTN33
C9H20	2,2-Dimethyl-3-ethylpentane	DMETPTN223
C9H20	2,4-Dimethyl-3-ethylpentane	DMETPTN243
C9H20	2,2-Dimethylheptane	DMHEPTAN22
C9H20	2,6-Dimethylheptane	DMHEPTAN26
C9H20	3-Ethylheptane	ETHEPTAN3
C9H20	2,2,5-Trimethylhexane	MEHXAN225
C9H20	2,4,4-Trimethylhexane	MEHXAN244
C9H20	2-Methyloctane	MEOCTAN2
C9H20	3-Methyloctane	MEOCTAN3
C9H20	4-Methyloctane	MEOCTAN4
C9H20	2,2,3,3-Tetramethylpentane	MEPNTN2233
C9H20	2,2,3,4-Tetramethylpentane	MEPNTN2234
C9H20	2,2,4,4-Tetramethylpentane	MEPNTN2244
C9H20	2,3,3,4-Tetramethylpentane	MEPNTN2334
C9H20O	2,6-Dimethyl-4-heptanol	MEHPT4OL26
C9H20O	1-Nonanol	NONANOL1
C9H20O	2-Nonanol	NONANOL2
C9H21N	1-Nonanamine	NONYLAMN1
C9H21N	Tripropylamine	TPROAMN
C9H22N+1	Hydrogen tripropylamine ion(+1)	HTPROAION
C9H6Cl8O	Isobenzan	ISOBENZAN
C9H7Cl3O3	2-(2,4,5-Trichlorophenoxy)propanoic acid	SILVEX
C9H7Cl3O3	Isooctyl 2-(2,4,5-trichlorophenoxy)propionate	TP245ESTER
C9H7N	Isoquinoline	ISQUINOLN
C9H7N	Quinoline	QUINOLINE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
C9H8	Indene	INDENE
C9H8Cl2O3	Methyl (2,4-dichlorophenoxy)acetate	DMEESTER24
C9H8O	1-Indanone	INDANON1
C9H8O	2-Methylbenzofuran	MEBNZFUR2
C9H8O2	Cinnamic acid	CINNAMICAC
C9H9N	2-Methyl-1H-indole	MEINDOL2
C9H9N	3-Methyl-1H-indole	MEINDOL3
C9H9N	3-Methyl-1H-indole	MEINDOL5
C9H9NO3-2	L-Tyrosine ion(-2)	LTYROSNION
Ca	Calcium	CAEL
Ca(Al2Si5O14).5H2O	Calcium dialuminum pentasilicate pentahydrate	CAPHILL
Ca(Al2Si6O16).5H2O	Calcium dialuminum hexasilicon hexadecaoxide pentahydrate	EPIS
Ca(CN)2	Calcium cyanide	CACN2
Ca(H2PO4)2	Calcium dihydrogen orthophosphate(V)	CAH2PO42
Ca(H2PO4)2.1H2O	Calcium dihydrogen orthophosphate(V) monohydrate	CAH2PO42.1H2O
Ca(HC2O4)2	Calcium di(hydrogen oxalate)	CAHC2O42
Ca(HCO3)2	Calcium bicarbonate	CAHCO32
Ca(HCO3)Cl	Calcium bicarbonate chloride	CAHCO3CL
Ca(HCO3)HS	Calcium bicarbonate bisulfide	CAHCO3HS
Ca(HCO3)HSO4	Calcium bicarbonate bisulfate	CAHCO3HSO4
Ca(HCO3)OH	Calcium bicarbonate hydroxide	CAHCO3OH
Ca(HS)2	Calcium bisulfide	CAHS2
Ca(HSO3)2	Calcium bisulfite	CAHSO32
Ca(HSO4)2	Calcium bisulfate	CAHSO42
Ca(NbO3)2	Calcium diniobium(V) hexaoxide	CANBO32
Ca(NH2CO2)2	Calcium carbamate	CANH2CO22
Ca(NO2)2	Calcium nitrite	CANO22
Ca(NO2)2.1H2O	Calcium nitrite monohydrate	CANO22.1H2O
Ca(NO2)2.4H2O	Calcium nitrite tetrahydrate	CANO22.4H2O
Ca(NO3)+1	Calcium mononitrate ion(+1)	CANO3ION
Ca(NO3)2	Calcium nitrate	CANO32
Ca(NO3)2.3H2O	Calcium nitrate trihydrate	CANO32.3H2O
Ca(NO3)2.4H2O	Calcium nitrate tetrahydrate	CANO32.4H2O
Ca(OH)2	Calcium hydroxide	CAOH2
Ca(OH)Cl	Calcium hydroxide chloride	CAOHCL
Ca(VO3)2	Calcium divanadium(V) hexaoxide	CAVO32
Ca[C10H12N2O8]-2	Calcium EDTA ion(-2)	CAEDTAION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ca[C10H14N2O8]	Calcium dihydrogen EDTA	CAH2EDTA
Ca[C14H18N3O10]-3	Calcium DTPA ion(-3)	CADTPAION
Ca[C2H3O2]+1	Calcium monoacetate ion(+1)	CAACETION
Ca[C2H3O2]2	Calcium acetate	CAACET2
Ca[C2H3O2]2.2H2O	Calcium acetate dihydrate	CAACET2.2H2O
Ca[C2H3O2]2.H2O	Calcium acetate monohydrate	CAACET2.1H2O
Ca[C2H3O3]+1	Calcium monoglycolate ion(+1)	CAGLYCOLION
Ca[C2H3O3]2	Calcium glycolate	CAGLYCOL2
Ca[C2H4NO2]+1	Calcium monoglycine ion(+1)	CAGLYCINION
Ca[C2H4NO2]2	Calcium diglycine	CAGLYCIN2
Ca[C3H5O2]+1	Calcium monopropionate ion(+1)	CAPROPION
Ca[C3H5O2]2	Calcium propanate	CAPROP2
Ca[C3H5O2]2.1H2O	Calcium propanate monohydrate	CAPROP2.1H2O
Ca[C3H6NO2]+1	Calcium mono(l-alpha-alanine) ion(+1)	CAALANION
Ca[C3H6NO2]2	Calcium di(l-alpha-alanine)	CAALAN2
Ca[C4H4O4]	Calcium succinate	CASUCCNATE
Ca[C4H4O6]	Calcium tartrate	CATARTRT
Ca[C6H5COO]+1	Calcium monobenzoate ion(+1)	CABENZOATION
Ca[C6H5COO]2	Calcium benzoate	CABNZAT
Ca[C6H5COO]2.3H2O	Calcium benzoate trihydrate	CABNZAT.3H2O
Ca[C6H5O7]-1	Calcium monocitrate ion(-1)	CACTRTION
Ca[C6H6NO6]	Calcium hydrogen NTA	CAHNTA
Ca[C6H6NO6]-1	Calcium mono-NTA ion(-1)	CANTAION
Ca[C6H6NO6]2-4	Calcium di-NTA ion(-4)	CANTA2ION
Ca[C7H4O3]	Calcium salicylate	CAOSALICYL
Ca[C7H5O3]+1	Calcium hydrogen salicylate ion(+1)	CAHOSALICYLION
Ca[Fe(CN)6]-1	Calcium hexacyanoferric(III) ion(-1)	CAFEIIICN6ION
Ca[Fe(CN)6]-2	Calcium hexacyanoferric(II) ion(-2)	CAFEIICN6ION
Ca[H2C6H5O7]+1	Calcium dihydrogen citrate ion(+1)	CAH2CTRTION
Ca[H3C14H18N3O10]	Calcium trihydrogen DTPA	CAH3DTPA
Ca[HC10H12N2O8]-1	Calcium hydrogen EDTA ion(-1)	CAHEDTAION
Ca[HC14H18N3O10]-2	Calcium hydrogen DTPA ion(-2)	CAHDTPAION
Ca[HC4H4O6]+1	Calcium hydrogen tartrate ion(+1)	CAHTARTRTION
Ca[HC6H5O7]	Calcium hydrogen citrate	CAHCTRT
Ca[HCOO]+1	Calcium monoformate ion (+1)	CACOOHION
Ca[HCOO]2	Calcium formate	CACOOH2
Ca+2	Calcium ion(+2)	CAION
Ca2[C14H18N3O10]-1	Dicalcium DTPA ion(-1)	CA2DTPAION
Ca2[Fe(CN)6]	Calcium ferrocyanide(II)	CA2FEIICN6

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ca2Al4Si8O24.7H2O	Dicalcium tetraaluminum octasilicon tetracosaoxide heptahydrate	LEON
Ca2Fe5Si8O22(OH)2	Dicalcium pentairon octasilicon docosaoxide dihydroxide	FERTREMLIT
Ca2Mg5Si8O22F2	Dicalcium pentamaganesium octasilicon docosaoxide difluoride	FLUTREMLIT
Ca3(AsO4)2	Calcium arsenate(V)	CA3ASO42
Ca3(BO3)2	Calcium orthoborate	CA3BO32
Ca3(PO4)2	Calcium orthophosphate	CA3PO42
Ca3(VO4)2	Calcium orthovanadate(V)	CA3VO42
Ca3[Fe(CN)6]2	Calcium ferricyanide(III)	CA3FECN62
CaAl2Si4O12.6H2O	Dialuminum calcium tetrasilicon dodecaoxide hexahydrate	CHABAZITE
CaAl2Si7O18.6H2O	Heulandite	HEULANDITE
CaBr2	Calcium bromide	CABR2
CaBr2.4H2O	Calcium bromide tetrahydrate	CABR2.4H2O
CaBr2.6H2O	Calcium bromide hexahydrate	CABR2.6H2O
CaC2O4	Calcium oxalate	CAC2O4
CaC2O4.1H2O	Calcium oxalate monohydrate	CAC2O4.1H2O
CaCl2	Calcium chloride	CACL2
CaCl2.2H2O	Calcium chloride dihydrate	CACL2.2H2O
CaCl2.4H2O	Calcium chloride tetrahydrate	CACL2.4H2O
CaCl2.6H2O	Calcium chloride hexahydrate	CACL2.6H2O
CaCl2.CaO	Calcium chloride oxide	CA2CL2O
CaCl2.CaO.2H2O	Calcium chloride oxide dihydrate	CA2CL2O.2H2O
CaCl2.H2O	Calcium chloride monohydrate	CACL2.1H2O
CaCO3	Calcium carbonate	CACO3
CaCr2O7	Calcium dichromate(VI)	CACR2O7
CaCr2O7.4H2O	Calcium dichromate(VI) tetrahydrate	CACR2O7.4H2O
CaCr2O7.5H2O	Calcium dichromate(VI) pentahydrate	CACR2O7.5H2O
CaCr2O7.6H2O	Calcium dichromate(VI) hexahydrate	CACR2O7.6H2O
CaCrO4	Calcium chromate(VI)	CACRO4
CaF+1	Calcium monofluoride ion(+1)	CAFION
CaF2	Calcium fluoride	CAF2
CaH2BO3+1	Calcium dihydrogen borate ion(+1)	CAH2BO3ION
CaH2PO4+1	Calcium dihydrogen orthophosphate(V) ion(+1)	CAH2PO4ION
CaH4TeO6	Calcium tetrahydrogen tellurium hexaoxide	CAH4TEO6
CaHC2O4+1	Calcium hydrogen oxalate ion(+1)	CAHC2O4ION
CaHCO3+1	Calcium bicarbonate ion(+1)	CAHCO3ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CaHCO3HCO3	Calcium di(bicarbonate)	CAHCO3HCO3
CaHPO4	Calcium hydrogen orthophosphate(V)	CAHPO4
CaHPO4.2H2O	Calcium hydrogen orthophosphate(V) dihydrate	CAHPO4.2H2O
CaHSiO3+1	Calcium hydrogen silicate ion(+1)	CAHSIO3ION
CaI2	Calcium iodide	CAI2
CaMoO4	Calcium molybdate(VI)	CAMOO4
CaOH+1	Calcium hydroxide ion(+1)	CAOHION
CaPO4-1	Calcium orthophosphate(V) ion(-1)	CAPO4ION
CaS	Cacium sulfide	CAS
CaSe	Calcium selenide	CASE
CaSeO3	Calcium selenite(IV)	CASEO3
CaSeO3.2H2O	Calcium selenite(IV) dihydrate	CASEO3.2H2O
CaSeO4	Calcium selenate(VI)	CASEO4
CaSeO4.2H2O	Calcium selenate(VI) dihydrate	CASEO4.2H2O
CaSiO2(OH)2	Calcium silicon dioxide dihydroxide	CAH2SIO4
CaSO3	Calcium sulfite	CASO3
CaSO3.0.5H2O	Calcium sulfite hemihydrate	CASO3.0.5H2O
CaSO3.2H2O	Calcium sulfite dihydrate	CASO3.2H2O
CaSO4	Calcium sulfate	CASO4
CaSO4.2H2O	Calcium sulfate dihydrate	CASO4.2H2O
CaTe	Calcium telluride	CATE
CaTeO3	Calcium tellurite	CATEO3
CaTeO3.H2O	Calcium tellurite monohydrate	CATEO3.1H2O
CaTiO3	Calcium titanium trioxide	CATIO3
CaWO4	Calcium tungsten tetraoxide	CAWO4
CBrCl3	Bromotrichloromethane	BRCL3ME
CBrClF2	Bromochlorodifluoromethane	BRCLF2C1
CCl2F2	Dichlorodifluoromethane	DICLDIFLME
CCl3F	Fluorotrichloromethane	TRICLFLME
CCl3NO2	Trichloronitromethane	TRICLNITME
CCl4	Carbon tetrachloride	CARBNTET
CClF3	Chlorotrifluoromethane	CLFL3ME
Cd	Cadmium	CDEL
Cd(C2O4)3-4	Cadmium trioxalate ion(-4)	CDC2O43ION
Cd(C2O8)2-2	Cadmium dioxalate ion(-2)	CDC2O42ION
Cd(CN)2	Cadmium cyanide	CDCN2
Cd(CN)3-1	Cadmium tricyanide ion(-1)	CDCN3ION
Cd(CN)4-2	Cadmium tetracyanide ion(-2)	CDCN4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Cd(HS)2	Cadmium bisulfide	CDHS2
Cd(HS)3-1	Cadmium tri(hydrogen sulfide) ion(-1)	CDHS3ION
Cd(HS)4-2	Cadmium tetra(hydrogen sulfide) ion(-2)	CDHS4ION
Cd(NH3)2+2	Cadmium diammonia ion(+2)	CDNH32ION
Cd(NH3)3+2	Cadmium triammonia ion(+2)	CDNH33ION
Cd(NH3)4+2	Cadmium tetraammonia ion(+2)	CDNH34ION
Cd(NH3)5+2	Cadmium pentaammonia ion(+2)	CDNH35ION
Cd(NH3)6+2	Cadmium hexaammonia ion(+2)	CDNH36ION
Cd(NO2)2	Cadmium nitrite	CDNO22
Cd(NO2)3-1	Cadmium trinitrite ion(-1)	CDNO23ION
Cd(NO3)2	Cadmium nitrate	CDNO32
Cd(NO3)2.2H2O	Cadmium nitrate dihydrate	CDNO32.2H2O
Cd(NO3)2.4H2O	Cadmium nitrate tetrahydrate	CDNO32.4H2O
Cd(OH)2	Cadmium hydroxide	CDOH2
Cd(OH)3-1	Cadmium trihydroxide ion(-1)	CDOH3ION
Cd(OH)4-2	Cadmium tetrahydroxide ion(-2)	CDOH4ION
Cd(SCN)2	Cadmium thiocyanate	CDSCN2
Cd(SCN)3-1	Cadmium trithiocyanate ion(-1)	CDSCN3ION
Cd(SCN)4-2	Cadmium tetrathiocyanate ion(-2)	CDSCN4ION
Cd(SeCN)2	Cadmium selenocyanate	CDSECN2
Cd[C10H12N2O8]-2	Cadmium mono-EDTA ion(-2)	CDEDTAION
Cd[C14H18N3O10]-3	Cadmium DTPA ion(-3)	CDDTPAION
Cd[C2H3O2]+1	Cadmium monoacetate ion(+1)	CDACETION
Cd[C2H3O2]2	Cadmium acetate	CDACET2
Cd[C2H3O2]3-1	Cadmium triacetate ion(-1)	CDACET3ION
Cd[C2H3O3]+1	Cadmium monoglycolate ion(+1)	CDGLYCOLION
Cd[C2H3O3]2	Cadmium glycolate	CDGLYCOL2
Cd[C2H4NO2]+1	Cadmium monoglycine ion(+1)	CDGLYCINION
Cd[C2H4NO2]2	Cadmium diglycine	CDGLYCIN2
Cd[C2H7NO]+2	Cadmium mono(2-aminoethanol) ion(+2)	CDMEXHION
Cd[C2H7NO]2+2	Cadmium di(2-aminoethanol) ion(+2)	CDMEXH2ION
Cd[C2H7NO]3+2	Cadmium tri(2-aminoethanol) ion(+2)	CDMEXH3ION
Cd[C2H8N2]+2	Cadmium mono(ethylenediamine) ion(+2)	CDEDAION
Cd[C2H8N2]2+2	Cadmium di(ethylenediamine) ion(+2)	CDEDA2ION
Cd[C2H8N2]3+2	Cadmium tri(ethylenediamine) ion(+2)	CDEDA3ION
Cd[C3H6NO2]+1	Cadmium mono(l-alpha-alanine) ion(+1)	CDALANION
Cd[C3H6NO2]2	Cadmium di(l-alpha-alanine)	CDALAN2
Cd[C4H11NO2]+2	Cadmium mono(N,N-diethanolamine) ion(+2)	CDDEXHION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Cd[C4H11NO2]2+2	Cadmium di(N,N-diethanolamine) ion(+2)	CDDEXH2ION
Cd[C6H15NO3]+2	Cadmium monotriethanolamine ion(+2)	CDTEXHION
Cd[C6H15NO3]2+2	Cadmium di(triethanolamine) ion(+2)	CDTEXH2ION
Cd[C6H15NO3]3+2	Cadmium tri(triethanolamine) ion(+2)	CDTEXH3ION
Cd[C6H5O7]-1	Cadmium citrate ion(-1)	CDCTRTION
Cd[C6H6NO6]-1	Cadmium mono-NTA ion(-1)	CDNTAION
Cd[C6H6NO6]2-4	Cadmium di-NTA ion(-4)	CDNTA2ION
Cd[H2C10H12N2O8]	Cadmium dihydrogen EDTA	CDH2EDTA
Cd[H2C14H18N3O10]-1	Cadmium dihydrogen DTPA ion(-1)	CDH2DTPAION
Cd[H2C6H5O7]+1	Cadmium dihydrogen citrate ion(+1)	CDH2CTRTION
Cd[H3C14H18N3O10]	Cadmium trihydrogen DTPA	CDH3DTPA
Cd[HC10H12N2O8]-1	Cadmium hydrogen EDTA ion(-1)	CDHEDTAION
Cd[HC14H18N3O10]-2	Cadmium hydrogen DTPA ion(-2)	CDHDTPAION
Cd[HC6H5O7]	Cadmium monohydrogen citrate	CDHCTRT
Cd[HC6H6NO6]	Cadmium hydrogen NTA	CDHNTA
Cd[HCOO]+1	Cadmium monoformate ion(+1)	CDCOOHION
Cd[HCOO]2	Cadmium formate	CDCOOH2
Cd[HCOO]2.2H2O	Cadmium formate dihydrate	CDCOOH2.2H2O
Cd+2	Cadmium ion(+2)	CDION
Cd2[C14H18N3O10]-1	Dicadmium DTPA ion(-1)	CD2DTPAION
CdBr+1	Cadmium bromide ion(+1)	CDBRION
CdBr2	Cadmium bromide	CDBR2
CdBr2.4H2O	Cadmium bromide tetrahydrate	CDBR2.4H2O
CdBr3-1	Cadmium tribromide ion(-1)	CDBR3ION
CdBr4-2	Cadmium tetrabromide ion(-2)	CDBR4ION
CdC2O4	Cadmium oxalate	CDC2O4
CdC2O4.3H2O	Cadmium oxalate trihydrate	CDC2O4.3H2O
CdCl+1	Cadmium monochloride ion(+1)	CDCLION
CdCl2	Cadmium chloride	CDCL2
CdCl2.1H2O	Cadmium chloride monohydrate	CDCL2.1H2O
CdCl2.2.5H2O	Cadmium chloride 2.5-hydrate	CDCL2.2.5H2O
CdCl3-1	Cadmium trichloride ion(-1)	CDCL3ION
CdCl4-2	Cadmium tetrachloride ion(-2)	CDCL4ION
CdCN+1	Cadmium cyanide ion(+1)	CDCNION
CdCO3	Cadmium carbonate	CDCO3
CdF+1	Cadmium monofluoride ion(+1)	CDFION
CdF2	Cadmium fluoride	CDF2
CdHS+1	Cadmium bisulfide ion(+1)	CDHSION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CdI+1	Cadmium monoiodide ion(+1)	CDIION
CdI2	Cadmium iodide	CDI2
CdI3-1	Cadmium triiodide ion(-1)	CDI3ION
CdI4-2	Cadmium tetraiodide ion(-2)	CDI4ION
CdMoO4	Cadmium molybdate(VI)	CDMOO4
CdNH3+2	Cadmium ammonia ion(+2)	CDNH3ION
CdNO2+1	Cadmium mononitrite ion(+1)	CDNO2ION
CdNO3+1	Cadmium mononitrate ion(+1)	CDNO3ION
CdOH+1	Cadmium monohydroxide ion(+1)	CDOHION
CdS	Cadmium sulfide	CDS
CdSCN+1	Cadmium monothiocyanate ion(+1)	CDSCNION
CdSe	Cadmium selenide	CDSE
CdSeCN+1	Cadmium monoselenocynate ion(+1)	CDSECNION
CdSeO3	Cadmium selenite	CDSEO3
CdSeO3.0.5H2O	Cadmium selenite hemihydrate	CDSEO3.0.5H2O
CdSeO4	Cadmium selenate	CDSEO4
CdSeO4.1H2O	Cadmium selenate monohydrate	CDSEO4.1H2O
CdSeO4.2H2O	Cadmium selenate dihydrate	CDSEO4.2H2O
CdSO4	Cadmium sulfate	CDSO4
CdSO4.2.6H2O	Cadmium sulfate 2.6 hydrate	CDSO4.2.6H2O
CdSO4.H2O	Cadmium sulfate monohydrate	CDSO4.1H2O
CdWO4	Cadmium tungstate	CDWO4
Ce	Cerium	CEEL
Ce(C2O4)2-1	Cerium(III) dioxalate ion(-1)	CEC2O42ION
Ce(C2O4)3-3	Cerium(III) trioxalate ion(-3)	CEC2O43ION
Ce(NO3)3	Cerium(III) nitrate	CENO33
Ce(NO3)3.6H2O	Cerium(III) nitrate hexahydrate	CENO33.6H2O
Ce(NO3)4	Cerium(IV) nitrate	CEIVNO34
Ce(OH)2+1	Cerium(III) dihydroxide ion(+1)	CEOH2ION
Ce(OH)3	Cerium(III) hydroxide	CEOH3
Ce(OH)4-1	Cerium(III) tetrahydroxide ion(-1)	CEOH4ION
Ce(SO4)2-1	Cerium(III) disulfate ion(-1)	CESO42ION
Ce(SO4)2-1	Cerium(III) monosulfate ion(+1)	CESO4ION
Ce[C10H12N2O8]-1	Cerium(III) EDTA ion(-1)	CEEDTAION
Ce[C14H18N3O10]-2	Cerium(III) DTPA ion(-2)	CEDTPAION
Ce[C2H3O2]+2	Cerium(III) monoacetate ion(+2)	CEACETION
Ce[C2H3O2]2+1	Cerium(III) diacetate ion(+1)	CEACET2ION
Ce[C2H3O2]3	Cerium(III) acetate	CEACET3
Ce[C6H5O7]	Cerium(III) citrate	CECTRT

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ce[C6H5O7]2-3	Cerium(III) dicitrate ion(-2)	CECTRT2ION
Ce[C6H6NO6]	Cerium(III) NTA	CENTA
Ce[C6H6NO6]2-3	Cerium(III) di-NTA ion(-3)	CENTA2ION
Ce[H2C14H18N3O10]	Cerium(III) dihydrogen DTPA	CEH2DTPA
Ce[HC10H12N2O8]	Cerium(III) hydrogen EDTA	CEHEDTA
Ce+3	Cerium ion(+3)	CEION
Ce+4	Cerium ion(+4)	CEIVION
Ce2(C2O4)3	Cerium(III) oxalate	CE2OX3
Ce2(C2O4)3.9H2O	Cerium(III) oxalate nonahydrate	CE2OX3.9H2O
Ce2(CO3)3	Cerium(III) carbonate	CE2CO33
Ce2(SO4)3	Cerium(III) sulfate	CE2SO43
Ce2(WO4)3	Cerium(III) tungstate	CE2WO43
Ce2O3	Cerium(III) oxide	CE2O3
Ce2S3	Cerium(III) sulfide	CE2S3
CeBr3	Cerium(III) bromide	CEBR3
CeC2O4+1	Cerium(III) monooxalate ion(+1)	CEC2O4ION
CeCl+2	Cerium(III) monochloride ion(+2)	CECLION
CeCl2+1	Cerium(III) dichloride ion(+1)	CECL2ION
CeCl3	Cerium(III) chloride	CECL3
CeCl4-1	Cerium(III) tetrachloride ion(-1)	CECL4ION
CeCO3+1	Cerium(III) monocarbonate ion(+1)	CECO3ION
CeF+2	Cerium(III) monofluoride ion(+2)	CEFION
CeF2+1	Cerium(III) difluoride ion(+1)	CEF2ION
CeF3	Cerium(III) fluoride	CEF3
CeF4-1	Cerium(III) tetrafluoride ion(-1)	CEF4ION
CeH2PO4+2	Cerium(III) dihydrogen orthophosphate ion(+2)	CEH2PO4ION
CeHCO3+2	Cerium(III) bicarbonate ion(+2)	CEHCO3ION
CeI3	Cerium(III) iodide	CEI3
CeNO3+2	Cerium(III) mononitrate ion(+2)	CENO3ION
CeO2	Cerium(IV) oxide	CEO2
CeOH+2	Cerium(III) monohydroxide ion(+2)	CEOHION
CePO4	Cerium(III) orthophosphate	CEPO4
CePO4.2H2O	Cerium(III) orthophosphate dihydrate	CEPO4.2H2O
CF4	Carbon tetrafluoride	FL4ME
CH2Br2	Dibromomethane	DBRMETHN
CH2BrCl	Bromochloromethane	BRCLME
CH2Cl2	Dichloromethane	DCLMETHN
CH2ClF	Chlorofluoromethane	CLFLME

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CH2F2	Difluoromethane	FL2ME
CH2I2	Diiodomethane	DIIMETHN
CH2O	Formaldehyde	FORMALDHYD
CH2O2	Formic acid	HCOOH
CH3Br	Methyl bromide	MBROMID
CH3Cl	Methyl chloride	CLME
CH3F	Methyl fluoride	FLME
CH3I	Methyl Iodide	IMETHAN
CH3NO	Formamide	FORMAMIDE
CH3NO2	Carbamic acid	HNH2CO2
CH3S-1	Methanethiol ion(-1)	CH3SION
CH4	Methane	CH4
CH4N2O	Urea	UREA
CH4N4O2	Nitroguanidine	NITGUANID
CH4O	Methanol	METHANOL
CH4S	Methanethiol	MEMERCAPTN
CH5N	Methylamine	MEAMINE
CH6N+1	Hydrogen methylamine ion(+1)	MEAMHION
CHBr2Cl	Dibromochloromethane	BR2CLME
CHBr3	Bromoform	BROMFORM
CHBrCl2	Bromodichloromethane	BRCL2ME
CHCl3	Chloroform	CHLOROFM
CHClF2	Chlorodifluoromethane	CLFL2ME
CHF3	Trifluoromethane	FL3ME
CHO2-1	Formate ion(-1)	COOHION
Cl-1	Chloride ion(-1)	CLION
Cl2	Chlorine	CL2
ClCN	Cyanogen chloride	CYANOGENCL
ClO-1	Hypochlorite ion(-1)	CLOION
ClO2	Chlorine dioxide	CLO2
ClO2-1	Chlorite ion(-1)	CLO2ION
ClO3-1	Chlorate ion(-1)	CLO3ION
ClO4-1	Perchlorate ion(-1)	CLO4ION
CN-1	Cyanide ion(-1)	CNION
CNO-1	Cyanate ion(-1)	CNOION
CO	Carbon monoxide	CO
Co	Cobalt	COEL
Co(C2O4)2-2	Cobalt(II) dioxalate ion(-2)	COIIC2O42ION
Co(C2O4)3-4	Cobalt(II) trioxalate ion(-4)	COIIC2O43ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Co(NH3)+2	Cobalt(II) monoammonia ion(+2)	COIINH3ION
Co(NH3)2+2	Cobalt(II) diammonia ion(+2)	COIINH32ION
Co(NH3)3+2	Cobalt(II) triammonia ion(+2)	COIINH33ION
Co(NH3)4+2	Cobalt(II) tetraammonia ion(+2)	COIINH34ION
Co(NH3)5+2	Cobalt(II) pentaammonia ion(+2)	COIINH35ION
Co(NH3)6+2	Cobalt(II) hexaammonia ion(+2)	COIINH36ION
Co(NH3)6+3	Cobalt(III) hexaammonia ion(+3)	COIIINH36ION
Co(NO3)2	Cobalt(II) nitrate	COIINO32
Co(NO3)2.2H2O	Cobalt(II) nitrate dihydrate	COIINO32.2H2O
Co(NO3)2.3H2O	Cobalt(II) nitrate trihydrate	COIINO32.3H2O
Co(NO3)2.4H2O	Cobalt(II) nitrate tetrahydrate	COIINO32.4H2O
Co(NO3)2.6H2O	Cobalt(II) nitrate hexahydrate	COIINO32.6H2O
Co(OH)2	Cobalt(II) hydroxide	COIIOH2
Co(OH)3	Cobalt(III) hydroxide	COIIIOH3
Co(OH)3-1	Cobalt(II) trihydroxide ion(-1)	COIIOH3ION
Co(OH)4-2	Cobalt(II) tetrahydroxide ion(-2)	COIIOH4ION
Co(SCN)2	Cobalt(II) thiocyanate	COIISCN2
Co(SeCN)2	Cobalt(II) selenocyanate	COIISECN2
Co[C10H12N2O8]-2	Cobalt(II) EDTA ion(-2)	COIIEDTAION
Co[C10H14N2O8]	Cobalt(II) dihydrogen EDTA	COIIH2EDTA
Co[C14H18N3O10]-3	Cobalt(II) DTPA ion(-3)	CODTPAION
Co[C2H3O2]+1	Cobalt(II) monoacetate ion(+1)	COACETION
Co[C2H3O2]2	Cobalt(II) acetate	COACET2
Co[C2H3O2]3-1	Cobalt(II) triacetate ion(-1)	COACET3ION
Co[C2H3O3]+1	Cobalt(II) monoglycolate ion(-1)	COIIGLYCION
Co[C2H3O3]2	Cobalt(II) glycolate	COIIGLYC2
Co[C2H4NO2]2	Cobalt(II) diglycine	COGLYCIN2
Co[C2H8N2]+2	Cobalt(II) monoethylenediamine ion(+2)	COEDAION
Co[C2H8N2]2+2	Cobalt(II) di(ethylenediamine) ion(+2)	COEDA2ION
Co[C2H8N2]3+2	Cobalt tri(ethylenediamine) ion(+2)	COEDA3ION
Co[C3H6NO2]+1	Cobalt(II) mono(L-alpha-alanine) ion(+1)	COIIALANION
Co[C3H6NO2]2	Cobalt(II) di(L-alpha-alanine)	COIIALAN2
Co[C4H4O6]	Cobalt(II) tartrate	COIITRTRT
Co[C6H15NO3]+2	Cobalt(II) monotriethanolamine ion(+2)	COIITEXHION
Co[C6H5O7]-1	Cobalt(II) citrate ion(-1)	COIICTRTION
Co[C6H6NO6]-1	Cobalt(II) mono-NTA ion(-1)	COIINTAION
Co[C6H6NO6]2-4	Cobalt(II) di-NTA ion(-4)	COIINTA2ION
Co[CAH4NO2]+1	Cobalt(II) monoglycine ion(+1)	COGLYCINION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Co[H2C14H18N3O10]-1	Cobalt(II) dihydrogen DTPA ion(-1)	COH2DTPAION
Co[H2C6H5O7]+1	Cobalt(II) dihydrogen citrate ion(+1)	COIIH2CTRTION
Co[H3C14H18N3O10]	Cobalt(II) trihydrogen DTPA	COH3DTPA
Co[HC10H12N2O8]-1	Cobalt(II) hydrogen EDTA ion(-1)	COIIHEDTAION
Co[HC14H18N3O10]-2	Cobalt(II) hydrogen DTPA ion(-2)	COHDTPAION
Co[HC6H5O7]	Cobalt(II) monohydrogen citrate	COIIHCTRT
Co[HC6H6NO6]	Cobalt(II) hydrogen NTA	COIIHNTA
Co[HCOO]+1	Cobalt(II) monoformate ion(+1)	COCOOHION
Co[HCOO]2	Cobalt(II) formate	COCOOH2
Co+2	Cobalt ion(+2)	COIIION
Co+3	Cobalt ion(+3)	COIIIION
CO2	Carbon dioxide	CO2
Co2[C14H18N3O10]-1	Dicobalt(II) DTPA ion(-1)	CO2DTPAION
CO3-2	Carbonate ion(-2)	CO3ION
CoBr+1	Cobalt(II) monobromide ion(+1)	COIIBRION
CoBr2	Cobalt(II) bromide	COIIBR2
CoBr2.2H2O	Cobalt(II) bromide dihydrate	COIIBR2.2H2O
CoBr2.4H2O	Cobalt(II) bromide tetrahydrate	COIIBR2.4H2O
CoBr2.6H2O	Cobalt(II) bromide hexahydrate	COIIBR2.6H2O
CoC2O4	Cobalt(II) oxalate	COC2O4
CoC2O4.2H2O	Cobalt(II) oxalate dihydrate	COC2O4.2H2O
CoCl+1	Cobalt(II) monochloride ion(+1)	COIICLION
CoCl2	Cobalt(II) chloride	COIICL2
CoCl2.2H2O	Cobalt(II) chloride dihydrate	COIICL2.2H2O
CoCl2.4H2O	Cobalt(II) chloride tetrahydrate	COIICL2.4H2O
CoCl2.6H2O	Cobalt(II) chloride hexahydrate	COIICL2.6H2O
CoCl3	Cobalt(III) chloride	COIIICL3
CoCO3	Cobalt(II) carbonate	COIICO3
CoF2	Cobalt(II) fluoride	COIIF2
CoF3	Cobalt(III) fluoride	COIIIF3
CoMoO4	Cobalt(II) molybdate(VI)	COIIMOO4
CoNO3+1	Cobalt(II) mononitrate ion(+1)	COIINO3ION
CoOH+1	Cobalt(II) monohydroxide ion(+1)	COIIOHION
CoOH+2	Cobalt(III) monohydroxide ion(+2)	COIIIOHION
CoS	Cobalt(II) sulfide	COIIS
COS	Carbonyl sulfide	COS
CoSCN+1	Cobalt(II) monocyanide ion(+1)	COIISCNION
CoSe	Cobalt(II) selenide	COSE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CoSeCN+1	Cobalt(II) selenocyanate ion(+1)	COIISECNION
CoSeO3	Cobalt(II) selenite	COSEO3
CoSeO3.2H2O	Cobalt(II) selenite dihydrate	COSEO3.2H2O
CoSeO4	Cobalt(II) selenate	COSEO4
CoSeO4.4H2O	Cobalt(II) selenate tetrahydrate	COSEO4.4H2O
CoSeO4.6H2O	Cobalt(II) selenate hexahydrate	COSEO4.6H2O
CoSeO4.7H2O	Cobalt(II) selenate heptahydrate	COSEO4.7H2O
CoSeO4.H2O	Cobalt(II) selenate monohydrate	COSEO4.1H2O
CoSO4	Cobalt(II) sulfate	COIISO4
CoSO4.1H2O	Cobalt(II) sulfate monohydrate	COIISO4.1H2O
CoSO4.6H2O	Cobalt(II) sulfate hexahydrate	COIISO4.6H2O
CoSO4.7H2O	Cobalt(II) sulfate heptahydrate	COIISO4.7H2O
CoWO4	Cobalt(II) tungstate	COWO4
Cr	Chromium	CREL
Cr(C2O4)2-2	Chromium(II) dioxalate ion(-2)	CRIIC2O42ION
Cr(NO3)3	Chromium(III) nitrate	CRIIINO33
Cr(NO3)3.9H2O	Chromium(III) nitrate nonahydrate	CRIIINO33.9H2O
Cr(OH)2	Chromium(II) hydroxide	CRIIOH2
Cr(OH)2+1	Chromium(III) dihydroxide ion(+1)	CROH2ION
Cr(OH)3	Chromium (III) hydroxide	CROH3
Cr(OH)4-1	Chromium(III) tetrahydroxide ion(-1)	CROH4ION
Cr[C10H12N2O8]-1	Chromium(III) EDTA ion(-1)	CRIIIEDTAION
Cr[C10H12N2O8]-2	Chromium(II) EDTA ion(-2)	CRIIEDTAION
Cr[H2C10H12N2O8]	Chromium(II) dihydrogen EDTA	CRIIH2EDTA
Cr[HC10H12N2O8]	Chromium(III) hydrogen EDTA	CRIIIHEDTA
Cr[HC10H12N2O8]-1	Chromium(II) hydrogen EDTA ion(-1)	CRIIHEDTAION
Cr+2	Chromium ion(+2)	CRIIION
Cr+3	Chromium ion(+3)	CRIIIION
Cr2(SO4)3	Chromium(III) sulfate	CR2SO4
Cr2(SO4)3	Chromium(III) sulfate	CR2SO43
Cr2(SO4)3.14H2O	Chromium(III) sulfate tetradecahydrate	CR2SO4.14H2O
Cr2(SO4)3.16H2O	Chromium(III) sulfate hexadecahydrate	CR2SO4.16H2O
Cr2O7-2	Dichromate(VI) ion(-2)	CR2O7ION
Cr2S3	Chromium(III) sulfide	CR2S3
CrBr+2	Chromium(III) monobromide ion(+2)	CRIIIBRION
CrBr2	Chromium(II) bromide	CRIIBR2
CrBr3	Chromium(III) bromide	CRIIIBR3
CrC2O4	Chromium(II) oxalate	CRIIC2O4
CrCl+2	Chromium(III) monochloride ion(+2)	CRIIICLION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CrCl2	Chromium(II) chloride	CRIICL2
CrCl2+1	Chromium(III) dichloride ion(+1)	CRIIICL2ION
CrCl3	Chromium(III) chloride	CRIIICL3
CrF+2	Chromium(III) monofluoride ion(+2)	CRFION
CrF2	Chromium(II) Fluoride	CRF2
CrF3	Chromium(III) fluoride	CRF3
CrH2PO4+2	Chromium(III) dihydrogen orthophosphate ion(+2)	CRIIIH2PO4ION
CrHPO4+1	Chromium(III) hydrogen orthophosphate ion(+1)	CRIIIHPO4ION
CrI+2	Chromium(III) monoiodide ion(+2)	CRIIIIION
CrI2	Chromium(II) iodide	CRIII2
CrI3	Chromium(III) iodide	CRIIII3
CrNO3+2	Chromium(III) mononitrate ion(+2)	CRIIINO3ION
CrO3	Chromium(VI) trioxide	CRO3
CrO4-2	Chromate(VI) ion(-2)	CRO4ION
CrOH+2	Chromium(III) monohydroxide ion(+2)	CROHION
CrS	Chromium(II) sulfide	CRS
CrSO4+1	Chromium(III) sulfate ion(+1)	CRSO4ION
Cs	Cesium	CSEL
Cs[B(C6H5)4]	Cesium tetraphenylborate	CSBPH4
Cs[C2H3O2]	Cesium acetate	CSACET
Cs[C2H3O3]	Cesium glycolate	CSGLYCOL
Cs[C2H3O3]2-1	Cesium diglycolate ion(-1)	CSGLYCOL2ION
Cs[C6H5O7]-2	Cesium citrate ion(-2)	CSCTRTION
Cs[H2C6H5O7]	Cesium dihydrogen citrate	CSH2CTRT
Cs[HCOO]	Cesium formate	CSCOOH
Cs[HCOO].1H2O	Cesium formate monohydrate	CSCOOH.1H2O
Cs+1	Cesium ion(+1)	CSION
CS2	Carbon disulfide	CRBDSULF
Cs2CO3	Cesium carbonate	CS2CO3
Cs2CO3.3.5H2O	Cesium carbonate 3.5 hydrate	CS2CO3.3.5H2O
Cs2CrO4	Cesium chromate(VI)	CS2CRO4
Cs2MoO4	Cesium molybdate(VI)	CS2MOO4
Cs2SeO3	Cesium selenite	CS2SEO3
Cs2SeO4	Cesium selenate	CS2SEO4
Cs2SO4	Cesium sulfate	CS2SO4
CsBO2	Cesium metaborate	CSBO2
CsBr	Cesium bromide	CSBR
CsCl	Cesium chloride	CSCL

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CsF	Cesium fluoride	CSF
CsF.1H2O	Cesium fluoride monohydrate	CSF.1H2O
CsH2PO4	Cesium dihydrogen orthophosphate	CSH2PO4
CsHF2	Cesium hydrogen difluoride	CSHF2
CsI	Cesium iodide	CSI
CsNbO3	Cesium niobate	CSNBO3
CsNO2	Cesium nitrite	CSNO2
CsNO3	Cesium nitrate	CSNO3
CsOH	Cesium hydroxide	CSOH
CsOH.H2O	Cesium hydroxide monohydrate	CSOH.1H2O
CsSO4-1	Cesium monosulfate ion(-1)	CSSO4ION
CsTaO3	Cesium tantalate	CSTAO3
CsTcO4	Cesium pertechnetate	CSTCVIIO4
Cu	Copper	CUEL
Cu(C2O4)2-2	Copper(II) dioxalate ion(-2)	CUC2O42ION
Cu(CN)2	Copper(II) cyanide	CUCN2
Cu(CN)2-1	Copper(I) dicyanide ion(-1)	CUICN2ION
Cu(CN)3-2	Copper(I) tricyanide ion(-2)	CUICN3ION
Cu(CN)4-3	Copper(I) tetracyanide ion(-3)	CUICN4ION
Cu(CO3)2-2	Copper(II) dicarbonate ion(-2)	CUCO32ION
Cu(H2PO4)2	Copper(II) dihydrogen orthophosphate	CUH2PO42
Cu(NH3)2+2	Copper(II) diammonia ion(+2)	CUNH32ION
Cu(NH3)3+2	Copper(II) triammonia ion(+2)	CUNH33ION
Cu(NH3)4+2	Copper(II) tetraammonia ion(+2)	CUNH34ION
Cu(NH3)5+2	Copper(II) pentaammonia ion(+2)	CUNH35ION
Cu(NO2)2	Copper(II) nitrite	CUNO22
Cu(NO3)2	Copper(II) nitrate	CUNO32
Cu(NO3)2.2.5H2O	Copper(II) nitrate 2.5 hydrate	CUNO32.2.5H2O
Cu(OH)[C10H12N2O8]-3	Copper(II) hydroxide EDTA ion(-3)	CUOHEDTAION
Cu(OH)[C6H6NO6]-2	Copper(II) hydroxide NTA ion(-2)	CUOHNTAION
Cu(OH)2	Copper(II) hydroxide	CUOH2
Cu(OH)3-1	Copper(II) trihydroxide ion(-1)	CUOH3ION
Cu(OH)4-2	Copper(II) tetrahydroxide ion(-2)	CUOH4ION
Cu(SCN)2	Copper(II) thiocyanate	CUSCN2
Cu(SCN)3-1	Copper(II) trithiocyanate ion(-1)	CUSCN3ION
Cu(SCN)4-2	Copper(II) tetrathiocyanate ion(-2)	CUSCN4ION
Cu[C10H12N2O8]-2	Copper(II) mono-EDTA ion(-2)	CUEDTAION
Cu[C14H18N3O10]-3	Copper(II) DTPA ion(-3)	CUDTPAION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Cu[C2H3O2]+1	Copper(II) monoacetate ion(+1)	CUACETION
Cu[C2H3O2]2	Copper(II) acetate	CUACET2
Cu[C2H3O2]3-1	Copper(II) triacetate ion(-1)	CUACET3ION
Cu[C2H3O3]+1	Copper(II) monoglycolate ion(+1)	CUGLYCOLION
Cu[C2H3O3]2	Copper(II) glycolate	CUGLYCOL2
Cu[C2H4NO2]+1	Copper(II) monoglycine ion(+1)	CUGLYCINION
Cu[C2H4NO2]2	Copper(II) diglycine	CUGLYCIN2
Cu[C2H7NO]+2	Copper(II) mono(2-aminoethanol) ion(+2)	CUMEXHION
Cu[C2H7NO]2+2	Copper(II) di(2-aminoethanol) ion(+2)	CUMEXH2ION
Cu[C2H7NO]3+2	Copper(II) tri(2-aminoethanol) ion(+2)	CUMEXH3ION
Cu[C2H7NO]4+2	Copper(II) tetra(2-aminoethanol) ion(+2)	CUMEXH4ION
Cu[C2H8N2]+2	Copper(II) monoethylenediamine ion(+2)	CUEDAION
Cu[C2H8N2]2+2	Copper(II) diethylenediamine ion(+2)	CUEDA2ION
Cu[C3H6NO2]+1	Copper(II) mono(L-alpha-alanine) ion(+1)	CUALANION
Cu[C3H6NO2]2	Copper(II) di(L-alpha-alanine)	CUALAN2
Cu[C4H11NO2]+2	Copper(II) mono(N,N-diethanolamine) ion(+2)	CUDEXHION
Cu[C4H11NO2]2+2	Copper(II) di(N.N-diethanolamine) ion(+2)	CUDEXH2ION
Cu[C4H11NO2]3+2	Copper(II) tri(N,N-diethanolamine) ion(+2)	CUDEXH3ION
Cu[C4H11NO2]4+2	Copper(II) tetra(N,N-diethanolamine) ion(+2)	CUDEXH4ION
Cu[C4H4O6]	Copper(II) tartrate	CUTRTRT
Cu[C5H13NO2]+2	Copper(II) monodiethanolmethylamine ion(+2)	CUMDEXHION
Cu[C5H13NO2]2+2	Copper(II) di(diethanolmethylamine) ion(+2)	CUMDEXH2ION
Cu[C5H13NO2]3+2	Copper(II) tri(diethanolmethylamine) ion(+2)	CUMDEXH3ION
Cu[C5H13NO2]4+2	Copper(II) tetra(diethanolmethylamine) ion(+2)	CUMDEXH4ION
Cu[C6H15NO3]+2	Copper(II) mono(triethanolamine) ion(+2)	CUTEXHION
Cu[C6H15NO3]2+2	Copper(II) di(triethanolamine) ion(+2)	CUTEXH2ION
Cu[C6H5O7]-1	Copper(II) citrate ion(-1)	CUCTRTION
Cu[C6H6NO6]-1	Copper(II) mono-NTA ion(-1)	CUNTAION
Cu[C6H6NO6]2-4	Copper(II) di-NTA ion(-4)	CUNTA2ION
Cu[H2C10H12N2O8]	Copper(II) dihydrogen EDTA	CUH2EDTA

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Cu[H2C14H18N3O10]-1	Copper(II) dihydrogen DTPA ion(-1)	CUH2DTPAION
Cu[H2C6H5O7]+1	Copper(II) dihydrogen citrate ion(+1)	CUH2CTRTION
Cu[H3C14H18N3O10]	Copper(II) trihydrogen DTPA	CUH3DTPA
Cu[HC10H12N2O8]-1	Copper(II) hydrogen EDTA ion(-1)	CUHEDTAION
Cu[HC14H18N3O10]-2	Copper(II) hydrogen DTPA ion(-2)	CUHDTPAION
Cu[HC6H5O7]	Copper(II) hydrogen citrate	CUHCTRT
Cu[HC6H6NO6]	Copper(II) hydrogen NTA	CUHNTA
Cu[HCOO]+1	Copper(II) monoformate ion(+1)	CUCOOHION
Cu[HCOO]2	Copper(II) formate	CUCOOH2
Cu+1	Copper(II) monochloride ion(+1)	CUCLION
Cu+1	Copper ion(+1)	CUIION
Cu+2	Copper(II) ion(+2)	CUION
Cu2[C14H18N3010]-1	Dicopper(II) DTPA ion(-1)	CU2DTPAION
Cu2O	Copper(I) oxide	CU2O
Cu2S	Copper(I) sulfide	CUI2S
Cu2Se	Copper(I) selenide	CU2SE
Cu3(PO4)2	Copper(II) phosphate	CU3PO42
Cu3(PO4)2.2H2O	Copper(II) orthophosphate dihydrate	CU3PO42.2H2O
Cu3(PO4)2.3H2O	Copper(II) orthophosphate trihydrate	CU3PO42.3H2O
CuBr	Copper(I) bromide	CUIBR
CuBr+1	Copper(II) monobromide ion(+1)	CUBRION
CuBr2	Copper(II) bromide	CUBR2
CuBr2.4H2O	Copper(II) bromide tetrahydrate	CUBR2.4H2O
CuC2O4	Copper(II) oxalate	CUC2O4
CuCl	Copper(I) chloride	CUCL
CuCl2	Copper(II) chloride	CUCL2
CuCl2.2H2O	Copper(II) chloride dihydrate	CUCL2.2H2O
CuCl3-1	Copper(II) trichloride ion(-1)	CUCL3ION
CuCN	Copper(I) cyanide	CUICN
CuCO3	Copper(II) carbonate	CUCO3
CuF	Copper(I) fluoride	CUF
CuF2	Copper(II) fluoride	CUF2
CuI	Copper(I) iodide	CUII
CuMoO4	Copper(II) molybdate	CUMOO4
CuNH3+2	Copper(II) monoammonia ion(+2)	CUNH3ION
CuNO2+1	Copper(II) mononitrite ion(+1)	CUNO2ION
CuNO3+1	Copper(II) mononitrate ion(+1)	CUNO3ION
CuNO32.6H2O	Copper(II) nitrate hexahydrate	CUNO32.6H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CuOH	Copper(I) hydroxide	CUIOH
CuOH+1	Copper(II) monohydroxide ion(+1)	CUOHION
CuS	Copper(II) sulfide	CUS
CuSCN+1	Copper(II) monothiocyanate ion(+1)	CUSCNION
CuSeO3	Copper(II) selenite	CUSEO3
CuSeO3.2H2O	Copper(II) selenite dihydrate	CUSEO3.2H2O
CuSeO4	Copper(II) selenate	CUSEO4
CuSeO4.5H2O	Copper(II) selenate pentahydrate	CUSEO4.5H2O
CuSO4	Copper(II) sulfate	CUSO4
CuSO4.3H2O	Copper(II) sulfate trihydrate	CUSO4.3H2O
CuSO4.5H2O	Copper(II) sulfate pentahydrate	CUSO4.5H2O
CuWO4	Copper(II) tungstate	CUWO4
Dy	Dysprosium	DYEL
Dy(NO3)3	Dysprosium(III) nitrate	DYNO33
Dy(OH)[C6H6NO6]-1	Dysprosium(III) hydroxide NTA ion(-1)	DYOHNTAION
Dy(OH)2+1	Dysprosium(III) dihydroxide ion(+1)	DYOH2ION
Dy(OH)3	Dysprosium(III) hydroxide	DYOH3
Dy(OH)4-1	Dysprosium(III) tetrahydroxide ion(-1)	DYOH4ION
Dy(SO4)2-1	Dysprosium(III) disulfate ion(-1)	DYSO42ION
Dy[C10H12N2O8]-1	Dysprosium(III) EDTA ion(-1)	DYEDTAION
Dy[C14H18N3O10]-2	Dysprosium(III) DTPA ion(-2)	DYDTPAION
Dy[C2H3O2]+2	Dysprosium(III) monoacetate ion(+2)	DYACETION
Dy[C2H3O2]2+1	Dysprosium(III) diacetate ion(+1)	DYACET2ION
Dy[C2H3O2]3	Dysprosium(III) acetate	DYACET3
Dy[C4H4O6]+1	Dysprosium(III) tartrate ion(+1)	DYTRTRTION
Dy[C6H5O7]	Dysprosium(III) citrate	DYCTRT
Dy[C6H6NO6]	Dysprosium(III) NTA	DYNTA
Dy[C6H6NO6]2-3	Dysprosium(III) di-NTA ion(-3)	DYNTA2ION
Dy[H2C14H18N3O10]	Dysprosium(III) dihydrogen DTPA	DYH2DTPA
Dy[HC10H12N2O8]	Dysprosium(III) hydrogen EDTA	DYHEDTA
Dy[HC10H18N3O10]-1	Dysprosium(III) hydrogen DTPA ion(-1)	DYHDTPAION
Dy+3	Dysprosium ion(+3)	DYION
Dy2(CO3)3	Dysprosium(III) carbonate	DY2CO33
Dy2(SO4)3	Dysprosium(III) sulfate	DY2SO43
Dy2(SO4)3.8H2O	Dysprosium(III) sulfate octahydrate	DY2SO43.8H2O
Dy2[C4H4O6]3	Dysprosium(III) tartrate	DY2TRTRT3
DyCl+1	Dysprosium(III) dichloride ion(+1)	DYCL2ION
DyCl+2	Dysprosium(III) monochloride ion(+2)	DYCLION
DyCl3	Dysprosium(III) chloride	DYCL3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
DyCl4-1	Dysprosium(III) tetrachloride ion(-1)	DYCL4ION
DyCO3+1	Dysprosium(III) carbonate ion(+1)	DYCO3ION
DyF+2	Dysprosium(III) monofluoride ion(+2)	DYFION
DyF2+1	Dysprosium(III) difluoride ion(+1)	DYF2ION
DyF3	Dysprosium(III) fluoride	DYF3
DyF4-1	Dysprosium(III) tetrafluoride ion(-1)	DYF4ION
DyH2PO4+2	Dysprosium(III) dihydrogen orthophosphate ion(+2)	DYH2PO4ION
DyHCO3+2	Dysprosium(III) bicarbonate ion(+2)	DYHCO3ION
DyNO3+2	Dysprosium(III) mononitrate ion(+2)	DYNO3ION
DyOH+2	Dysprosium(III) monohydroxide ion(+2)	DYOHION
DyPO4	Dysprosium(III) orthophosphate	DYPO4
DySO4+1	Dysprosium(III) monosulfate ion(+1)	DYSO4ION
Er	Erbium	EREL
Er(NO3)3	Erbium(III) nitrate	ERNO33
Er(OH)[C6H6NO6]-1	Erbium(III) hydroxide NTA ion(-1)	EROHNTAION
Er(OH)2+1	Erbium(III) dihydroxide ion(+1)	EROH2ION
Er(OH)3	Erbium(III) hydroxide	EROH3
Er(OH)4-1	Erbium(III) tetrahydroxide ion(-1)	EROH4ION
Er(SO4)2-1	Erbium(III) disulfate ion(-1)	ERSO42ION
Er[C10H12N2O8]-1	Erbium(III) EDTA ion(-1)	EREDTAION
Er[C14H18N3O10]-1	Erbium(III) hydrogen DTPA ion(-1)	ERHDTPAION
Er[C14H18N3O10]-2	Erbium(III) DTPA ion(-2)	ERDTPAION
Er[C2H3O2]+2	Erbium(III) monoacetate ion(+2)	ERACETION
Er[C2H3O2]2+1	Erbium(III) diacetate ion(+1)	ERACET2ION
Er[C2H3O2]3	Erbium(III) acetate	ERACET3
Er[C4H4O6]+1	Erbium(III) tartrate ion(+1)	ERTRTRTION
Er[C6H5O7]	Erbium(III) citrate	ERCTRT
Er[C6H6NO6]	Erbium(III) NTA	ERNTA
Er[C6H6NO6]2-3	Erbium(III) di-NTA ion(-3)	ERNTA2ION
Er[H2C14H18N3O10]	Erbium(III) dihydrogen DTPA	ERH2DTPA
Er[HC10H12N2O8]	Erbium(III) hydrogen EDTA	ERHEDTA
Er+3	Erbium ion (+3)	ERION
Er2(CO3)3	Erbium(III) carbonate	ER2CO33
Er2(SO4)3	Erbium(III) sulfate	ER2SO43
Er2(SO4)3.8H2O	Erbium(III) sulfate octahydrate	ER2SO43.8H2O
Er2[C4H4O6]3	Erbium(III) tartrate	ER2TRTRT3
ErCl+2	Erbium(III) monochloride ion(+2)	ERCLION
ErCl2+1	Erbium(III) dichloride ion(+1)	ERCL2ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
ErCl3	Erbium(III) chloride	ERCL3
ErCL3.6H2O	Erbium(III) chloride hexahydrate	ERCL3.6H2O
ErCl4-1	Erbium(III) tetrachloride ion(-1)	ERCL4ION
ErCO3+1	Erbium(III) monocarbonate ion(+1)	ERCO3ION
ErF+2	Erbium(III) monofluoride ion(+2)	ERFION
ErF2+1	Erbium(III) difluoride ion(+1)	ERF2ION
ErF3	Erbium(III) fluoride	ERF3
ErF4-1	Erbium(III) tetrafluoride ion(-1)	ERF4ION
ErH2PO4+2	Erbium(III) dihydrogen orthophosphate ion(+2)	ERH2PO4ION
ErHCO3+2	Erbium(III) bicarbonate ion(+2)	ERHCO3ION
ErNO3+2	Erbium(III) mononitrate ion(+2)	ERNO3ION
ErOH+2	Erbium(III) monohydroxide ion(+2)	EROHION
ErPO4	Erbium(III) orthophosphate	ERPO4
ErSO4+1	Erbium(III) monosulfate ion(+1)	ERSO4ION
Eu	Europium	EUEL
Eu(NO3)3	Europium(III) nitrate	EUNO33
Eu(OH)[C6H6NO6]-1	Europium(III) hydroxide NTA ion(-1)	EUOHNTAION
Eu(OH)2	Europium(II) hydroxide	EUIIOH
Eu(OH)2+1	Europium(III) dihydroxide ion(+1)	EUOH2ION
Eu(OH)3	Europium(III) hydroxide	EUOH3
Eu(OH)4-1	Europium(III) tetrahydroxide ion(-1)	EUOH4ION
Eu(SO4)2-1	Europium(III) disulfate ion(-1)	EUSO42ION
Eu[C10H12N2O8]-1	Europium(III) EDTA ion(-1)	EUEDTAION
Eu[C14H18N3O10]-2	Europium(III) DTPA ion(-2)	EUDTPAION
Eu[C2H2O3]+2	Europium(III) monoacetate ion(+2)	EUACETION
Eu[C2H3O2]2+1	Europium(III) diacetate ion(+1)	EUACET2ION
Eu[C2H3O2]3	Europium(III) acetate	EUACET3
Eu[C2O4]+1	Europium(III) monooxalate(+1)	EUC2O4ION
Eu[C2O4]2-1	Europium(III) dioxalate ion(-1)	EUC2O42ION
Eu[C3H6NO2]+1	Europium(II) mono(L-alpha-alanine) ion(+1)	EUIIALANION
Eu[C3H6NO2]2	Europium(II) di(L-alpha-alanine)	EUIIALAN2
Eu[C4H4O6]+1	Europium(III) monotartrate ion(+1)	EUTRTRTION
Eu[C6H5O7]	Europium(III) citrate	EUCTRT
Eu[C6H6NO6]	Europium(III) NTA	EUNTA
Eu[C6H6NO6]2-3	Europium(III) di-NTA ion(-3)	EUNTA2ION
Eu[CHO2]+1	Europium(II) monoformate ion(+1)	EUIIFORION
Eu[CHO2]+2	Europium(III) monoformate ion(+2)	EUFORION
Eu[CHO2]2	Europium(II) formate	EUIIFOR2

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Eu[CHO2]2+1	Europium(III) diformate ion(+1)	EUFOR2ION
Eu[CHO2]3	Europium(III) formate	EUFOR3
Eu[H2C14H18N3O10]	Europium(III) dihydrogen DTPA	EUH2DTPA
Eu[HC10H12N2O8]	Europium(III) hydrogen EDTA	EUHEDTA
Eu[HC14H18N3O10]-1	Europium(III) hydrogen DTPA ion(-1)	EUHDTPAION
Eu+2	Europium ion(+2)	EUIIION
Eu+3	Europium ion(+3)	EUIIIION
Eu2(CO3)3	Europium(III) carbonate	EU2CO33
Eu2(SO4)3	Europium(III) sulfate	EU2SO43
Eu2(SO4)3.8H2O	Europium(III) sulfate octahydrate	EU2SO43.8H2O
Eu2[C2O4]3	Europium(III) oxalate	EU2C2O43
Eu2[C4H4O603	Europium(III) tartrate	EU2TRTRT3
EuBr+2	Europium(III) monobromide ion(+2)	EUBRION
EuBr3	Europium(III) bromide	EUBR3
EuCl+1	Europium(II) monochloride ion(+1)	EUIICLION
EuCl+2	Europim(III) monochloride ion(+2)	EUCLION
EuCl2	Europium(II) chloride	EUIICL2
EuCl2+1	Europium(III) dichloride ion(+1)	EUCL2ION
EuCl3	Europium(III) chloride	EUCL3
EuCL3.6H2O	Europium(III) chloride hexahydrate	EUCL3.6H2O
EuCL3-1	Europium(II) trichloride ion(-1)	EUIICL3ION
EuCl4-1	Europium(III) tetrachloride ion(-1)	EUCL4ION
EuCl4-2	Europium(II) tetrachloride ion(-2)	EUIICL4ION
EuCO3+1	Europium(III) monocarbonate ion(+1)	EUCO3ION
EuF+1	Europium(II) monofluoride ion(+1)	EUIIFION
EuF+2	Europium(III) fluoride ion(+2)	EUFION
EuF2	Europium(II) fluoride	EUIIF2
EuF2+1	Europium(III) difluoride ion(+1)	EUF2ION
EuF3	Europium(III) fluoride	EUF3
EuF3-1	Europium(II) trifluoride ion(-1)	EUIIF3ION
EuF4-1	Europium(III) tetrafluoride ion(-1)	EUF4ION
EuF4-2	Europium(II) tetrafluoride ion(-2)	EUIIF4ION
EuH2PO4+2	Europium(III) dihydrogen orthophosphate ion(+2)	EUH2PO4ION
EuHCO3+2	Europium(III) hydrogen carbonate ion(+2)	EUHCO3ION
EuNO3+2	Europium(III) mononitrate ion(+2)	EUNO3ION
EuOH+2	Europium(III) monohydroxide ion(+2)	EUOHION
EuPO4	Europium(III) orthophosphate	EUPO4
EuSO4+1	Europium(III) monosulfate ion(+1)	EUSO4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
F-1	Fluoride ion (-1)	FION
F2	Fluorine	F2
Fe	Iron	FEEL
Fe(C2O4)2-1	Iron(III) dioxalate ion(-1)	FEIIIC2O42ION
Fe(C2O4)2-2	Iron(II) dioxalate ion(-2)	FEIIC2O42ION
Fe(C2O4)3-3	Iron(III) trioxalate ion(-3)	FEIIIC2O43ION
Fe(C2O4)3-4	Iron(II) trioxalate ion(-4)	FEIIC2O43ION
Fe(CN)6-3	Iron(III) hexacyanide ion(-3)	FEIIICN6ION
Fe(CN)6-4	Iron(II) hexacyanide ion(-4)	FEIICN6ION
Fe(HAsO4)+1	Iron(III) monohydrogen orthoarsenate ion(+1)	FEIIIHASO4ION
Fe(NO3)2	Iron(II) nitrate	FEIINO32
Fe(NO3)2.6H2O	Iron(II) nitrate hexahydrate	FEIINO32.6H2O
Fe(NO3)3	Iron(III) nitrate	FEIIINO33
Fe(NO3)3.9H2O	Iron(III) nitrate nonahydrate	FEIIINO33.9H2O
Fe(OH)2	Iron(II) hydroxide	FEIIOH2
Fe(OH)2+1	Iron(III) dihydroxide ion(+1)	FEIIIOH2ION
Fe(OH)3	Iron(III) hydroxide	FEIIIOH3
Fe(OH)3-1	Iron(II) trihydroxide ion(-1)	FEIIOH3ION
Fe(OH)4-1	Iron(III) tetrahydroxide ion(-1)	FEIIIOH4ION
Fe(OH)4-2	Iron(II) tetrahydroxide ion(-2)	FEIIOH4ION
Fe(SCN)2+1	Iron(III) dithiocyanate ion(+1)	FEIIISCN2ION
Fe(SCN)3	Iron(III) thiocyanate	FEIIISCN3
Fe[C10H12N2O8]-1	Iron(III) EDTA ion(-1)	FEIIIEDTAION
Fe[C10H12N2O8]-2	Iron(II) EDTA ion(-2)	FEIIEDTAION
Fe[C10H14N2O8]	Iron(II) dihydrogen EDTA	FEIIH2EDTA
Fe[C14H18N3O10]-2	Iron(III) DTPA ion(-2)	FEDTPAION
Fe[C14H18N3O10]-3	Iron(II) DTPA ion(-3)	FEIIDTPAION
Fe[C2H3O2]+1	Iron(II) monoacetate ion(+1)	FEACETION
Fe[C2H3O2]2	Iron(II) acetate	FEACET2
Fe[C2H3O3]+1	Iron(II) monoglycolate ion(+1)	FEIIGLYCION
Fe[C2H3O3]+2	Iron(III) glycolate ion(+2)	FEIIIGLYCOION
Fe[C2H3O3]2	Iron(II) glycolate	FEIIGLYC2
Fe[C2H4NO2]+1	Iron(II) monoglycinate ion(+1)	FEGLYCINION
Fe[C2H4NO2]2	Iron(II) glycinate	FEGLYCIN2
Fe[C3H6NO2]+1	Iron(II) mono(L-alpha-alanine) ion(+1)	FEIIALANION
Fe[C3H6NO2]2	Iron(II) di(L-alpha-alanine)	FEIIALAN2
Fe[C4H4O6]	Iron(II) tartrate	FEIITRTRT
Fe[C4H4O6]+1	Iron(III) tartrate ion(+1)	FEIIITRTRTION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Fe[C4H4O6]3	Iron(III) tartrate	FE2TARTRT3
Fe[C6H5O7]	Iron(III) citrate	FEIIICTRT
Fe[C6H5O7]-1	Iron(II) citrate ion(-1)	FEIICTRTION
Fe[C6H6NO6]	Iron(III) NTA	FENTA
Fe[C6H6NO6]-1	Iron(II) NTA ion(-1)	FEIINTAION
Fe[C6H6NO6]2-3	Iron(III) di-NTA ion(-3)	FENTA2ION
Fe[H2C14H18N3O10]	Iron(III) dihydrogen DTPA	FEH2DTPA
Fe[H3C14H18N3O10]	Iron(II) trihydrogen DTPA	FEIIH3DTPA
Fe[HC10H12N2O8]	Iron(III) hydrogen EDTA	FEIIIHEDTA
Fe[HC10H12N2O8]-1	Iron(II) hydrogen EDTA ion(-1)	FEIIHEDTAION
Fe[HC14H18N3O10]-1	Iron(III) hydrogen DTPA ion(-1)	FEHDTPAION
Fe[HC14H18N3O10]-2	Iron(II) hydrogen DTPA ion(-2)	FEIIHDTPAION
Fe[HC6H5O7]	Iron(II) hydrogen citrate	FEIIHCTRT
Fe[HC6H6NO6]	Iron(II) hydrogen NTA	FEIIHNTA
Fe[HCOO]+1	Iron(II) monoformate ion(+1)	FECOOHION
Fe[HCOO]2	Iron(II) formate	FECOOH2
Fe[NO][C10H12N2O8]-2	Iron(II) nitrogen monoxide EDTA ion(-2)	FEIINOEDTAION
Fe+2	Iron ion(+2)	FEIIION
Fe+3	Iron ion(+3)	FEIIIION
Fe1.11Te	Iron(II) telluride	FETE
Fe2(C2O4)3	Iron(III) oxalate	FEIII2C2O43
Fe2(OH)2+4	Diiron(III) dihydroxide ion(+4)	FEIII2OH2ION
Fe2(SO4)3	Iron(III) sulfate	FE2SO43
Fe2[C14H18N3O10]-1	Diiron(II) DTPA ion(-1)	FEII2DTPAION
Fe2Al2SiO5(OH)4	Dialuminum diiron silicon pentaoxide tetrahydroxide	CHAMOSITE7A
Fe2Al9Si4O23(OH)	Diiron nonaaluminum tetrasilicon tricosaoxide hydroxide	STAUROLITE
Fe2Fe(FeSiO5)(OH)4	Tetrairon silicon petaoxide tetrahydroxide	CRONS7A
Fe3(PO4)2	Iron(II) orthophosphate	FEII3PO42
Fe3(PO4)2.8H2O	Iron(II) orthophosphate octahydrate	FEII3PO42.8H2O
Fe3Al2Si3O12	Almandine	ALMANDINE
Fe3Si2O5(OH)4	Triiron disilicon pentaoxide tetrahydroxide	GREENALITE
Fe3Si4O10(OH)2	Triiron tetrasilicon decaoxide dihydroxide	MINESOTAIT
Fe4[Fe(CN)6]3	Iron(III) hexacyanoferrate(II)	FE4FECN63
Fe5Al2Si3O10(OH)8	Pentairon dialuminum trisilicon decaoxide octahydroxide	DAPHNIT14A
Fe7Si8O22(OH)2	Heptairon octasilicon docosaoxide dihydroxide	GRUNERITE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
FeAl2SiO5(OH)2	Dialuminum iron silicon pentoxide dihydroxide	CHLORITOID
FeAsO4	Iron(III) Arsenate	FEIIIARSO4
FeAsO4	Iron(III) Arsenate	FEARSO4
FeAsO4.2H2O	Iron(III) Arsenate dihydrate	FEARSO4.2H2O
FeBr+2	Iron(III) monobromide ion(+2)	FEIIIBRION
FeBr2	Iron(II) bromide	FEIIBR2
FeBr2.2H2O	Iron(II) bromide dihydrate	FEIIBR2.2H2O
FeBr2.4H2O	Iron(II) bromide tetrahydrate	FEIIBR2.4H2O
FeBr2.6H2O	Iron(II) bromide hexahydrate	FEIIBR2.6H2O
FeBr3	Iron(III) bromide	FEIIIBR3
FeC2O4	Iron(II) oxalate	FEIIC2O4
FeC2O4+1	Iron(III) monooxalate ion(+1)	FEIIIC2O4ION
FeCl+1	Iron(II) monochloride ion(+1)	FEIICLION
FeCl2	Iron(II) chloride	FEIICL2
FeCl2.2H2O	Iron(II) chloride dihydrate	FEIICL2.2H2O
FeCl2.4H2O	Iron(II) chloride tetrahydrate	FEIICL2.4H2O
FeCl2.6H2O	Iron(II) chloride hexahydrate	FEIICL2.6H2O
FeCl2+1	Iron(III) dichloride ion(+1)	FEIIICL2ION
FeCl2+2	Iron(III) monochloride ion(+2)	FEIIICLION
FeCl3	Iron (III) chloride	FECL3
FeCl3.2.5H2O	Iron(III) chloride 2.5 hydrate	FECL3.2.5H2O
FeCl3.2H2O	Iron(III) chloride dihydrate	FECL3.2H2O
FeCl3.6H2O	Iron(III) chloride hexahydrate	FECL3.6H2O
FeCl4-1	Iron(III) tetrachloride ion(-1)	FEIIICL4ION
FeCO3	Iron(II) carbonate	FEIICO3
FeF+2	Iron(III) monofluoride ion(+2)	FEIIIFION
FeF2	Iron(II) fluoride	FEIIF2
FeF2+1	Iron(III) difluoride ion(+1)	FEIIIF2ION
FeF3	Iron(III) fluoride	FEIIIF3
FeH2PO4+1	Iron(II) dihydrogen orthophosphate ion(+1)	FEIIH2PO4ION
FeH2PO4+2	Iron(III) dihydrogen orthophosphate ion(+2)	FEIIIH2PO4ION
FeHC2O4+2	Iron(III) hydrogen oxalate ion(+2)	FEIIIHC2O4ION
FeHCO3+1	Iron(II) bicarbonate ion(+1)	FEIIHCO3ION
FeHPO4	Iron(II) hydrogen orthophosphate	FEIIHPO4
FeHPO4+1	Iron(III) hydrogen orthophosphate ion(+1)	FEIIIHPO4ION
FeI+2	Iron(III) monoiodide ion(+2)	FEIIIIION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
FeI2	Iron(II) iodide	FEIII2
FeI2+1	Iron(III) diiodide ion(+1)	FEIIII2ION
FeI3	Iron(III) iodide	FEIIII3
FeMoO4	Iron(II) molybdate(VI)	FEMOO4
FeNaSi2O6	Iron(III) sodium silicate	NAFEIIISIO
FeNO3+2	Iron(III) mononitrate ion(+2)	FEIIINO3ION
FeOH+1	Iron(II) monohydroxide ion(+1)	FEIIOHION
FeOH+2	Iron(III) monohydroxide ion(+2)	FEIIIOHION
FePO4	Iron(III) orthophosphate	FEIIIPO4
FePO4.2H2O	Iron(III) phosphate dihydrate	FEIIIPO4.2H2O
FeS	Iron(II) sulfide	FEIIS
FeS2	Iron(II) disulfide	FEIIS2
FeSCN+2	Iron(III) monothiocyanate ion(+2)	FEIIISCNION
FeSO3	Iron(II) sulfite	FEIISO3
FeSO4	Iron(II) sulfate	FEIISO4
FeSO4.1H2O	Iron(II) sulfate monohydrate	FEIISO4.1H2O
FeSO4.4H2O	Iron(II) sulfate tetrahydrate	FEIISO4.4H2O
FeSO4.7H2O	Iron(II) sulfate heptahydrate	FEIISO4.7H2O
FeSO4+1	Iron(III) sulfate ion(+1)	FEIIISO4ION
FeTiO3	Iron(II) titanate	FETIO3
FeWO4	Iron(II) tungstate(VI)	FEIIWO4
Ga	Gallium	GAEL
Ga(OH)3	Gallium hydroxide	GAOH3
Ga+3	Gallium ion(+3)	GAION
Gd	Gadolinium	GDEL
Gd(NO3)3.6H2O	Gadolinium(III) nitrate hexahydrate	GDNO33.6H2O
Gd(OH)[C6H6NO6]-1	Gadolinium(III) monohydroxide NTA ion(-1)	GDOHNTAION
Gd(OH)2+1	Gadolinium(III) dihydroxide ion(+1)	GDOH2ION
Gd(OH)3	Gadolinium(III) hydroxide	GDOH3
Gd(OH)4-1	Gadolinium(III) tetrahydroxide ion(-1)	GDOH4ION
Gd(SO4)2-1	Gadolinium(III) disulfate ion(-1)	GDSO42ION
Gd[C10H12N2O8]-1	Gadolinium(III) EDTA ion(-1)	GDEDTAION
Gd[C14H18N3O10]-2	Gadolinium(III) DTPA ion(-2)	GDDTPAION
Gd[C2H3O2]+2	Gadolinium(III) monoacetate ion(+2)	GDACETION
Gd[C2H3O2]2+1	Gadolinium(III) diacetate ion(+1)	GDACET2ION
Gd[C2H3O2]3	Gadolinium(III) acetate	GDACET3
Gd[C4H4O6]+1	Gadolinium(III) tartrate ion(+1)	GDTRTRTION
Gd[C6H5O7]	Gadolinium(III) citrate	GDCTRT

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Gd[C6H6NO6]	Gadolinium(III) NTA	GDNTA
GD[C6H6NO6]2-3	Gadolinium(III) di-NTA ion(-3)	GDNTA2ION
Gd[CHO2]+2	Gadolinium(III) monoformate ion(+2)	GDFORION
Gd[CHO2]2+1	Gadolinium(III) diformate ion(+1)	GDFOR2ION
Gd[CHO2]3	Gadolinium(III) formate	GDFOR3
Gd[H2C14H18N3O10]	Gadolinium(III) dihydrogen DTPA	GDH2DTPA
Gd[HC10H12N2O8]	Gadolinium(III) hydrogen EDTA	GDHEDTA
Gd[HC14H18N3O10]-1	Gadolinium(III) hydrogen DTPA ion(-1)	GDHDTPAION
Gd+3	Gadolium ion(+3)	GDION
Gd2(CO3)3	Gadolinium(III) carbonate	GD2CO33
Gd2(SO4)3	Gadolinium(III) sulfate	GD2SO43
Gd2(SO4)3.8H2O	Gadolinium(III) sulfate octahydrate	GD2SO43.8H2O
Gd2[C4H4O6]3	Gadolinium(III) tartrate	GD2TRTRT3
Gd9NO3)3	Gadolinium(III) nitrate	GDNO33
GdBr+2	Gadolinium(III) monobromide ion(+2)	GDBRION
GdBr3	Gadolinium(III) bromide	GDBR3
GdCl+2	Gadolinium(III) monochloride ion(+2)	GDCLION
GdCl2+1	Gadolinium(III) dichloride ion(+1)	GDCL2ION
GdCl3	Gadolinium(III) chloride	GDCL3
GdCl4-1	Gadolinium(III) tetrachloride ion(-1)	GDCL4ION
GdCO3+1	Gadolinium(III) carbonate ion(+1)	GDCO3ION
GdF+2	Gadolinium(III) monofluoride ion(+2)	GDFION
GdF2+1	Gadolinium(III) difluoride ion(+1)	GDF2ION
GdF3	Gadolinium(III) fluoride	GDF3
GdF4-1	Gadolinium(III) tetrafluoride ion(-1)	GDF4ION
GdH2PO4+2	Gadolinium(III) dihydrogen orthophosphate ion(+2)	GDH2PO4ION
GdHCO3+2	Gadolinium(III) bicarbonate ion(+2)	GDHCO3ION
GdI+2	Gadolinium(III) monoiodide ion(+2)	GDIION
GdI3	Gadolinium(III) iodide	GDI3
GdNO3+2	Gadolinium(III) mononitrate ion(+2)	GDNO3ION
GdOH+2	Gadolinium(III) monohydroxide ion(+2)	GDOHION
GdPO4	Gadolinium(III) orthophosphate	GDPO4
GdSO4+1	Gadolinium(III) monosulfate ion(+1)	GDSO4ION
Ge	Germanium	GEEL
H[B(C6H5)4]	Hydrogen tetraphenylborate	HBPH4
H[C14H18N3O10]-4	Hydrogen DTPA ion(-4)	HDTPAION
H[C6H6NO6]-2	Hydrogen NTA ion(-2)	HNTAION
H[Fe(CN)6]-3	Hydrogen ferrocyanide(II) ion(-3)	HFEIICN6ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
H+1	Hydrogen ion(+1)	HION
H2	Hydrogen	H2
H2[C14H18N3O10]-3	Dihydrogen DTPA ion(-3)	H2DTPAION
H2[C6H6NO6]-1	Dihydrogen NTA ion(-1)	H2NTAION
H2[Fe(CN)6]-2	Dihydrogen ferrocyanide ion(-2)	H2FEIICN6ION
H2As2S3O	Arsenic(III) sulfide oxide	H2AS2S3O
H2AsO4-1	Dihydrogen arsenate(VI) ion(-1)	H2ASO4ION
H2C10H12N2O8-2	Dihydrogen EDTA ion(-2)	H2EDTAION
H2C2H8N2+2	Dihydrogen ethylenediamine ion(+2)	H2ENAMN2ION
H2CO3	Carbonic acid	H2CO3
H2CrO4	Chromic(VI) acid	H2CRO4
H2CrO7	Dichromic(VI) acid	H2CR2O7
H2MnO4	Manganic(VI) acid	H2MNO4
H2MoO4	Molybdenic(VI) acid	H2MOO4
H2N(CH2)4CH(NH2)CO2H	Lysine	HLYSINE
H2N(CH2)4CH(NH2)CO2H-1	Lysine ion(-1)	LYSINEION
H2N(CH2)4CH(NH3)CO2H+1	Dihydrogen lysine ion(+1)	H2LYSINEION
H2O	Water	H2O
H2O2	HYDROGEN PEROXIDE	H2O2
H2P2O7-2	Dihydrogen pyrophosphate(V) ion(-2)	H2P2O7ION
H2PO3-1	Dihydrogen phosphate(III) ion(-1)	H2PO3ION
H2PO4-1	Dihydrogen orthophosphate(V) ion(-1)	H2PO4ION
H2S	Hydrogen sulfide	H2S
H2S2	Dihydrogen disulfide	H2S2
H2S2O3	Thiosulfuric acid	H2S2O3
H2S2O4	Dithionous acid	H2S2O4
H2S2O6	Dithionic acid	H2S2O6
H2S2O8	Peroxodisulfuric(VII) acid	H2S2O8
H2S5O6	Pentathionic acid	H2S5O6
H2Se	Dihydrogen selenide	SEH2
H2SeO3	Selenious(IV) acid	H2SEO3
H2SeO4	Selenic(VI) acid	H2SEO4
H2SiF6	Dihydrogen hexafluorosilicate	H2SIF6
H2SiO4-2	Dihydrogen orthosilicate ion(-2)	H2SIO4ION
H2SO3	Sulfurous(IV) acid	H2SO3
H2SO4	Sulfuric(VI) acid	H2SO4
H2SO5	Peroxomonosulfuric(VIII) acid	H2SO5

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
H2Te	Hydrogen telluride	H2TE
H2TeO3	Tellurous(IV) acid	H2TEIVO3
H2TeO4	Telluric(VI) acid	H2TEO4
H2TeO4.2H2O	Telluric(VI) acid dihydrate	H2TEO4.2H2O
H2TeO4.6H2O	Telluric(VI) acid hexahydrate	H2TEO4.6H2O
H2VO4-1	Dihydrogen orthovanadate(V) ion(-1)	H2VO4ION
H2WO4	Tungstic(VI) acid	H2WO4
H2ZrF6	Hexafluorozirconic acid	H2ZRF6
H3[C14H18N3O10]-2	Trihydrogen DTPA ion(-2)	H3DTPAION
H3[Fe(CN)6]	Trihydrogen hexaferricyanide	H3FEIIICN6
H3AsO3	Arsenious acid	H3ASO3
H3AsO4	Arsenic(VI) acid	H3ASO4
H3C10H12N2O8-1	Trihydrogen EDTA ion(-1)	H3EDTAION
H3IO6-2	Trihydrogen orthoperiodate ion(-2)	H3IO6ION
H3N(CH2)4CH(NH3)CO2H+2	òTrihydrogen lysine ion(+2)	H3LYSINEION
H3P2O7-1	Trihydrogen pyrophosphate(V) ion(-1)	H3P2O7ION
H3PO3	Phosphorous(III) acid	H3PO3
H3PO4	Orthophosphoric acid	H3PO4
H3SiO4-1	Trihydrogen silicate ion(-1)	H3SIO4ION
H4[C14H18N3O10]-1	Tetrahydrogen DTPA ion(-1)	H4DTPAION
H4[C6H6NO6]+1	Tetrahydrogen NTA ion(+1)	H4NTAION
H4[Fe(CN)6]	Tetrahydrogen ferrocyanide(II)	H4FEIICN6
H4C10H12N2O8	EDTA	H4EDTA
H4IO6-1	Tetrahydrogen orthoperiodate(VII) ion(-1)	H4IO6ION
H4O4Pt		PTOH4
H4P2O7	Pyrophosphoric(VI) acid	H4P2O7
H4SiO4	Silicic acid	H4SIO4
H4TeO6-2	Tetrahydrogen orthotellurate ion(-2)	H4TEO6ION
H5C10H12N2O8+1	Pentahydrogen EDTA ion(+1)	H5EDTAION
H5C14H18N3O10	DTPA	H5DTPA
H5IO6	Periodic(VII) acid	H5IO6
H5TeO6-1	Pentahydrogen orthotelluric acid ion(-1)	H5TEO6ION
H6C10H12N2O8+2	Hexahydrogen EDTA ion(+2)	H6EDTAION
H6TeO6	Orthotelluric acid	H6TEO6
HAs2S4-1	Hydrogen diarsenic(III) tetrasulfide ion	HAS2S4ION
HAsO2	Metaarsenic(III) acid	HASO2
HAsO3-2	Biarsenate ion(-2)	HARSO3ION
HAsO4-2	Hydrogen arsenate(VI) ion(-2)	HASO4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
HBr	Hydrogen bromide	HBR
HBr3	Hydrogen tribromide	HBR3
HBrO	Hypobromic(I) acid	HBRO
HBrO3	Bromic(VI) acid	HBRO3
HBrO4	Perbromic(VII) acid	HBRO4
HC10H12N2O8-3	Hydrogen EDTA ion(-3)	HEDTAION
HC2H8N2+1	Hydrogen ethylenediamine ion(+1)	HENAMN2ION
HCl	Hydrogen chloride	HCL
HClO	Hypochlorous acid	HCLO
HClO2	Chlorous(III) acid	HCLO2
HClO3	Chloric(VI) acid	HCLO3
HClO4	Perchloric acid	HCLO4
HCN	Hydrocyanic acid	HCN
HCNO	Cyanic acid	HCNO
HCO3-1	Bicarbonate ion(-1)	HCO3ION
HCrO4-1	Bichromate(VI) ion(-1)	HCRO4ION
He	Helium	HE
HF	Hydrogen fluoride	HF
Hf	Hafnium	HFEL
HF2-1	Hydrogen difluoride ion (-1)	HF2ION
Hg	Mercury	HGEL
Hg(CN)2	Mercury(II) cyanide	HGCN2
Hg(CN)3-1	Mercury(II) tricyanide ion(-1)	HGCN3ION
Hg(CN)4-2	Mercury(II) tetracyanide ion(-2)	HGCN4ION
Hg(NH3)2+2	Mercury(II) diammonia ion(+2)	HGNH32ION
Hg(NH3)3+2	Mercury(II) triammonia ion(+2)	HGNH33ION
Hg(NH3)4+2	Mercury(II) tetraammonia ion(+2)	HGNH34ION
Hg(OH)[C2H8N2]+1	Mercury(II) monohydroxide ethylenediamine ion(+1)	HGOHEDAION
Hg(OH)2	Mercury(II) hydroxide	HGOH2
Hg(OH)3-1	Mercury(II) trihydroxide ion(-1)	HGOH3ION
Hg(SCN)2	Mercury(II) thiocyanate	HGSCN2
Hg(SCN)3-1	Mercury(II) tri(thiocyanate) ion(-1)	HGSCN3ION
Hg(SCN)4-2	Mercury(II) tetra(thiocyanate) ion(-2)	HGSCN4ION
Hg[C10H12N2O8]-2	Mercury(II) EDTA ion(-2)	HGEDTAION
Hg[C14H18N3O10]-3	Mercury(II) DTPA ion(-3)	HGDTPAION
Hg[C2H3O2]+1	Mercury(II) monoacetate ion(+1)	HGACETION
Hg[C2H3O2]2	Mercury(II) acetate	HGACET2
Hg[C2H3O2]3-1	Mercury(II) triacetate ion(-1)	HGACET3ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Hg[C2H3O3]+1	Mercury(II) monoglycolate ion(+1)	HGGLYCOLION
Hg[C2H3O3]2	Mercury(II) glycolate	HGGLYCOL2
Hg[C2H4NO2]+1	Mercury(II) monoglycine ion(+1)	HGGLYCINION
Hg[C2H4NO2]2	Mercury(II) diglycine	HGGLYCIN2
Hg[C2H7NO]+2	Mercury(II) mono(2-aminoethanol) ion(+2)	HGMEXHION
Hg[C2H7NO]2+2	Mercury(II) di(2-aminoethanol) ion(+2)	HGMEXH2ION
Hg[C2H8N2]+2	Mercury(II) monoethylenediamine ion(+2)	HGEDAION
Hg[C2H8N2]2+2	Mercury(II) di(ethylenediamine) ion(+2)	HGEDA2ION
Hg[C4H11NO2]+2	Mercury(II) mono(N,N-diethanolamine) ion(+2)	HGDEXHION
Hg[C4H11NO2]2+2	Mercury(II) di(N,N-diethanolamine) ion(+2)	HGDEXH2ION
Hg[C4H4O6]	Mercury(II) tartrate	HGTARTRT
Hg[C6H15NO3]+2	Mercury(II) monotriethanolamine ion(+2)	HGTEXHION
Hg[C6H15NO3]2+2	Mercury(II) di(triethanolamine) ion(+2)	HGTEXH2ION
Hg[C6H5O7]-1	Mercury(II) citrate ion(-1)	HGCTRTION
Hg[C6H6NO6]-1	Mercury(II) NTA ion(-1)	HGNTAION
Hg[H2C10H12N2O8]	Mercury(II) dihydrogen EDTA	HGH2EDTA
Hg[H3C14H18N3O10]	Mercury(II) trihydrogen DTPA	HGH3DTPA
Hg[HC10H12N2O8]-1	Mercury(II) hydrogen EDTA ion(-1)	HGHEDTAION
Hg[HC14H18N3O10]-2	Mercury(II) hydrogen DTPA ion(-2)	HGHDTPAION
Hg[HC6H5O7]	Mercury(II) hydrogen citrate	HGHCTRT
Hg[HC6H6NO6]	Mercury(II) hydrogen NTA	HGHNTA
Hg+2	Mercury(II) ion(+2)	HGION
Hg2(OH)2	Dimercury(I) dihydroxide	HG2OH2
Hg2+2	Dimercury(I) ion (+2)	HG2ION
Hg2Cl2	Mercurous(I) chloride	HG2CL2
Hg2CO3	Mercury(I) carbonate	HG2CO3
Hg2OH+1	Dimercury(I) hydroxide ion(+1)	HG2OHION
HgBr+1	Mercury(II) monobromide ion(+1)	HGBRION
HgBr2	Mercury(II) bromide	HGBR2
HgBr-2	Mercury(II) tetrabromide ion(-2)	HGBR4ION
HgBr3-1	Mercury(II) tribromide ion(-1)	HGBR3ION
HgC2O4	Mercury(II) oxalate	HGC2O4
HgCl+1	Mercury(II) monochloride ion(+1)	HGCLION
HgCl2	Mercury(II) chloride	HGCL2
HgCl3-1	Mercury(II) trichloride ion(-1)	HGCL3ION
HgCl4-2	Mercury(II) tetrachloride ion(-2)	HGCL4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
HgCN+1	Mercury(II) monocyanide ion(+1)	HGCNION
HgF+1	Mercury(II) monofluoride ion(+1)	HGFION
HgF2	Mercury(II) fluoride	HGF2
HgH[C2H8N2]+3	Mercury(II) hydrogen di(ethylenediamine) ion(+3)	HGHEDA2ION
HgH2[C2H8N2]2+4	Mercury(II) dihydrogen di(ethylenediamine) ion(+4)	HGH2EDA2ION
HgH2[C2H8N2]3+4	Mercury(II) dihydrogen tri(ethylenediamine) ion(+4)	HGH2EDA3ION
HgI+1	Mercury(II) monoiodide ion(+1)	HGIION
HgI2	Mercury(II) iodide	HGI2
HgI3-1	Mercury(II) triiodide ion(-1)	HGI3ION
HgI4-2	Mercury(II) tetraiodide ion(-2)	HGI4ION
HgMoO4	Mercury(II) molybdate(VI)	HGMOO4
HgNH3+2	Mercury(II) monoammonia ion(+2)	HGNH3ION
HgO	Mercury(II) oxide	HGO
HgOH+1	Mercury(II) monohydroxide ion(+1)	HGOHION
HgS	Mercury(II) sulfide	HGS
HgSCN+1	Mercury(II) monothiocyanate ion(+1)	HGSCNION
HgSe	Mercury(II) selenide	HGSE
HgSeO3	Mercury(II) selenite(IV)	HGSEO3
HgSeO4	Mercury(II) selenate(VI)	HGSEO4
HgWO4	Mercury(II) tungstate(VI)	HGWO4
HI	Hydrogen iodide	HI
HI3	Hydrogen triiodide	HIOD3
HIO	Hypoiodous(I) acid	HIO
HIO3	Iodic(V) acid	HIO3
HIO4	Periodic(VII) acid	HIODO4
HMnO4	Permanganic(VII) acid	HMNO4
HNbO3	Niobic(V) acid	HNBO3
HNO2	Nitrous(III) acid	HNO2
HNO3	Nitric(V) acid	HNO3
Ho	Holmium	HOEL
Ho(NO3)3	Holmium(III) nitrate	HONO33
Ho(OH)[C6H6NO6]-1	Holmium(III) hydroxide NTA ion(-1)	HOOHNTAION
Ho(OH)2+1	Holmium(III) dihydroxide ion(+1)	HOOH2ION
Ho(OH)3	Holmium(III) hydroxide	HOOH3
Ho(OH)4-1	Holmium(III) tetrahydroxide ion(-1)	HOOH4ION
Ho(SO4)2-1	Holmium(III) disulfate ion(-1)	HOSO42ION
Ho[C10H12N2O8]-1	Holmium(III) EDTA ion(-1)	HOEDTAION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ho[C14H18N3O10]-2	Holmium(III) DTPA ion(-2)	HODTPAION
Ho[C2H3O2]+2	Holmium(III) monoacetate ion(+2)	HOACETION
Ho[C2H3O2]2+1	Holmium(III) diacetate ion(+1)	HOACET2ION
Ho[C2H3O2]3	Holmium(III) acetate	HOACET3
Ho[C6H5O7]	Holmium(III) citrate	HOCTRT
Ho[C6H6NO6]	Holmium(III) NTA	HONTA
Ho[C6H6NO6]2-3	Holmium(III) di-NTA ion(-3)	HONTA2ION
Ho[H2C14H18N3O10]	Holmium(III) dihydrogen DTPA	HOH2DTPA
Ho[HC10H12N2O8]	Holmium(III) hydrogen EDTA	HOHEDTA
Ho[HC14H18N3O10]-1	Holmium(III) hydrogen DTPA ion(-1)	HOHDTPAION
Ho+3	Holmium ion(+3)	HOION
Ho2(CO3)3	Holmium(III) carbonate	HO2CO33
Ho2(SO4)3	Holmium(III) sulfate	HO2SO43
Ho2(SO4)3.8H2O	Holmium(III) sulfate octahydrate	HO2SO43.8H2O
Ho2[C4H4O6]3	Holmium(III) tartrate	HO2TRTRT3
HO2-1	Hydrogen peroxide ion(-1)	HO2ION
HO2C(CH2)2CH(NH2)CO2H	L-Glutamic acid	LGLUTAMAC
HO2C(CH2)2CH(NH2)CO2H	L-Glutamic acid	DLGLUTAMAC
HO2C(CH2)2CH(NH2)CO2H	L-Glutamic acid	GLUTAMACA
HoBr3	Holmium(III) bromide	HOBR3
HoCl+2	Holmium(III) monochloride ion(+2)	HOCLION
HoCl2+1	Holmium(III) dichloride ion(+1)	HOCL2ION
HoCl3	Holmium(III) chloride	HOCL3
HoCl3.6H2O	Holmium(III) chloride hexahydrate	HOCL3.6H2O
HoCl4-1	Holmium(III) tetrachloride ion(-1)	HOCL4ION
HoCO3+1	Holmium(III) carbonate ion(+1)	HOCO3ION
HoF+2	Holmium(III) monofluoride ion(+2)	HOFION
HoF2+1	Holmium(III) difluoride ion(+1)	HOF2ION
HoF3	Holmium fluoride	HOF3
HoF4-1	Holmium(III) tetrafluoride ion(-1)	HOF4ION
HoH2PO4+2	Holmium(III) dihydrogen orthophosphate(V) ion(+2)	HOH2PO4ION
HoHCO3+2	Holmium(III) bicarbonate ion(+2)	HOHCO3ION
HoNO3+2	Holmium(III) mononitrate ion(+2)	HONO3ION
HoOH+2	Holmium(III) monohydroxide ion(+2)	HOOHION
HoPO4	Holmium(III) orthophosphate	HOPO4
HoSO4+1	Holmium(III) monosulfate ion(+1)	HOSO4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
HP2O7-3	Hydrogen pyrophosphate(V) ion(-3)	HP2O7ION
HPbO2-1	Hydrogen dioxylead ion(-1)	HPBO2ION
HPO3-2	Hydrogen metaphosphate(III) ion(-2)	HPO3ION
HPO4-2	Hydrogen orthophosphate(V) ion (-2)	HPO4ION
HReO4	Tetraoxorhenic(VII) acid	HREO4
HS-1	Hydrogen sulfide ion (-1)	HSION
HSCN	Thiocyanic acid	HSCN
HSe-1	Hydrogen selinide ion (-1)	HSEION
HSeCN	Selenocyanic acid	HSECN
HSeO3-1	Hydrogen selenite(IV) ion (-1)	HSEO3ION
HSeO4-1	Hydrogen selenate(VI) ion(-1)	HSEO4ION
HSO3-1	Bisulfite(IV) ion (-1)	HSO3ION
HSO4-1	Bisulfate(VI) ion (-1)	HSO4ION
HSO5-1	Hydrogen persulfate(VIII) ion (-1)	HSO5ION
HTaO3	Tantalic(V) acid	HTAO3
HTcO4	Pertechnetic(VII) acid	HTCVIIO4
HTe-1	Hydrogen telluride ion(-1)	HTEION
HTeO3-1	Hydrogen tellurite(IV) ion(-1)	HTEIVO3ION
HVO4-2	Hydrogen pervanadate(V) ion(-2)	HVO4ION
HWO4-1	Hydrogen tungstate(VI) ion(-1)	HWO4ION
HZrF6-1	Hydrogen hexafluorozirconic acid ion(-1)	HZRF6ION
I-1	Iodide ion(-1)	IODION
I2	Iodine	IOD2EL
I3-1	Triiodide ion(-1)	IOD3ION
In	Indium	INEL
In(OH)3	Indium(III) hydroxide	INOH3
In+3	Indium ion(+3)	INION
IO-1	Hypoiodate(I) ion(-1)	IODOION
IO3-1	Iodate(VI) ion(-1)	IODO3ION
IO4-1	Periodate(VII) ion(-1)	IODO4ION
Ir	Iridium	IREL
K	Potassium	KEL
K[B(C6H5)4]	Potassium tetraphenylborate	KBPH4
K[C10H12N2O8]-3	Potassium EDTA ion(-3)	K1EDTAION
K[C2H3O2]	Potassium acetate	KACET
K[C2H3O3]	Potassium glycolate	KGLYCOLAT
K[C2H3O3]2-1	Potassium diglycolate ion(-1)	KGLYCOL2ION
K[C2H5COO]	Potassium propionate	KPROP
K[C4H4O4]-1	Potasium succinate ion	K1SUCCNATEION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
K[C4H4O6]-1	Potassium monotartrate ion(-1)	KTARTRTION
K[C6H5COO]	Potassium benzoate	KBNZAT
K[C6H5O7]-2	Potassium citrate ion(-2)	KCTRTION
K[Fe(CN)6]-2	Monopotassium ferricyanide(III) ion(-2)	K1FEIIICN6ION
K[Fe(CN)6]-3	Monopotassium ferrocyanide(II) ion(-3)	K1FEIICN6ION
K[H3C10H12N2O8]	Potassium trihydrogen EDTA	KH3EDTA
K[HC4H4O6]	Potassium hydrogen tartrate	KHTARTRT
K[HCOO]	Potassium formate	KCOOH
K+1	Potassium ion(+1)	KION
K2[C4H4O4]	Potasium succinate	K2SUCCNATE
K2[C4H4O4]	Potasium succinate	K2SUC
K2[C4H4O4].3H2O	Potasium succinate trihydrate	K2SUC.3H2O
K2Al2Si5O14.5H2O	Dipotassium dialuminum pentasilicon tetradecaoxide pentahydrate	KPHILL
K2C2O4	Potassium oxalate	K2C2O4
K2C2O4.H2O	Potassium oxalate monohydrate	K2C2O4.1H2O
K2CO3	Potassium carbonate	K2CO3
K2CO3.1.5H2O	Potassium carbonate 1.5 hydrate	K2CO3.1.5H2O
K2Cr2O7	Potassium dichromate(VI)	K2CR2O7
K2CrO4	Potassium chromate(VI)	K2CRO4
K2HPO4	Potassium hydrogen phosphate(V)	K2HPO4
K2HPO4.3H2O	Potassium hydrogen orthophosphate(V) trihydrate	K2HPO4.3H2O
K2HPO4.6H2O	Potassium hydrogen orthophosphate(V) hexahydrate	K2HPO4.6H2O
K2MoO4	Patassium molybdate(VI)	K2MOO4
K2S	Potassium sulfide	K2S
K2S2O8	Potassium persulfate(VII)	K2S2O8
K2Se	Potassium selenide	K2SE
K2SeO3	Potassium selenite(IV)	K2SEO3
K2SeO3.4H2O	Potassium selenite(IV) tetrahydrate	K2SEO3.4H2O
K2SeO4	Potassium selenate(VI)	K2SEO4
K2SO3	Potassium sulfite(IV)	K2SO3
K2SO4	Potassium sulfate(VI)	K2SO4
K2SO4.1H2O	Potassium sulfate(VI) monohydrate	K2SO4.1H2O
K2SO4.KNaSO4	Glaserite	K3NASO42
K2TeO4	Potassium tellurate	K2TEO4
K2WO4	Potassium tungstate(VI)	K2WO4
K3[C6H5O7]	Potassium citrate	K3CTRT
K3[C6H5O7].H2O	Potassium citrate monohydrate	K3CTRT.1H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
K3[Fe(CN)6]	Potassium ferricyanide(III)	K3FEIIICN6
K3PO4	Potassium orthophosphate(V)	K3PO4
K3PO4.3H2O	Potassium orthophosphate(V) trihydrate	K3PO4.3H2O
K3PO4.7H2O	Potassium orthophosphate(V) heptahydrate	K3PO4.7H2O
K4[Fe(CN)6]	Potassium ferrocyanide(II)	K4FECN6
K4[Fe(CN)6].3H2O	Potassium ferrocyanide(II) trihydrate	K4FECN6.3H2O
KAl(SO4)2	Potassium aluminum sulfate	K1ALSO4
KAl(SO4)2.12H2O	Potassium aluminum sulfate dodecahydrate	K1ALSO4.12H2O
KBO2	Potassium metaborate	KBO2
KBr	Potassium bromide	KBR
KCl	Potassium chloride	KCL
KClO	Potassium hypochlorite	KCLO
KClO3	Potassium chlorate(V)	KCLO3
KCN	Potassium cyanide	KCN
KF	Potassium fluoride	KF
KF.2H2O	Potassium fluoride dihydrate	KF.2H2O
KF.4H2O	Potassium fluoride tetrahydrate	KF.4H2O
KH2AsO4	Potassium dihydrogen arsenate(V)	KH2ASO4
KH2PO4	Potassium dihydrogen orthophosphate(V)	KH2PO4
KHCO3	Potassium bicarbonate	KHCO3
KHS	Potassium bisulfide	KHS
KHSO3	Potassium bisulfite(IV)	KHSO3
KHSO4	Potassium bisulfate(VI)	KHSO4
KI	Potassium iodide	KI
KIO3	Potassium iodate	KIO3
KMgCl3	Potassium magnesium chloride	KMGCL3
KMgCl3.2H2O	Potassium magnesium chloride dihydrate	KMGCL3.2H2O
KMnO4	Potassium permanganate(VII)	KMNO4
KNbO3	Potassium niobate(V)	KNBO3
KNH2CO2	Potassium carbamate	KNH2CO2
KNO2	Potassium nitrite(III)	KNO2
KNO3	Potassium nitrate(VI)	KNO3
KOH	Potassium hydroxide	KOH
KOH.1H2O	Potassium hydroxide monohydrate	KOH.1H2O
KOH.2H2O	Potassium hydroxide dihydrate	KOH.2H2O
Kr	Krypton	KR
KSCN	Potassium thiocyanate	KSCN
KSO4-1	Potassium sulfate(VI) ion(-1)	KSO4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
KTaO3	Potassium tantalate(V)	KTAO3
KTcO4	Potassium pertechnetate(VII)	KTCVIIO4
La	Lanthanum	LAEL
La(NO3)3	Lanthanum(III) nitrate	LANO33
La(NO3)3.6H2O	Lanthanum(III) nitrate hexahydrate	LANO33.6H2O
La(OH)[C6H6NO6]-1	Lanthanum(III) hydroxide NTA ion(-1)	LAOHNTAION
La(OH)2+1	Lanthanum(III) dihydroxide ion(+1)	LAOH2ION
La(OH)3	Lanthanum(III) hydroxide	LAOH3
La(OH)4-1	Lanthanum(III) tetrahydroxide ion(-1)	LAOH4ION
La(SO4)2-1	Lanthanum(III) disulfate ion(-1)	LASO42ION
La(SO4)3	Lanthanum(III) sulfate	LA2SO43
La[C10H12N2O8]-1	Lanthanum(III) EDTA ion(-1)	LAEDTAION
La[C10H13N2O8]	Lanthanum(III) hydrogen EDTA	LAHEDTA
La[C14H18N3O10]-2	Lanthanum(III) DTPA ion(-2)	LADTPAION
La[C2H3O2]+2	Lanthanum(III) monoacetate ion(+2)	LAACETION
La[C2H3O2]2+1	Lanthanum(III) diacetate ion(+1)	LAACET2ION
La[C2H3O2]3	Lanthanum(III) acetate	LAACET3
La[C4H4O6]+1	Lanthanum(III) monotartrate ion(+1)	LATARTRTION
La[C4H4O6]2-1	Lanthanum(III) ditartrate ion(-1)	LATARTRT2ION
La[C6H6NO6]	Lanthanum(III) NTA	LANTA
La[C6H6NO6]-3	Lanthanum(III) di-NTA ion(-3)	LANTA2ION
La[H2C14H18N3O10]	Lanthanum(III) dihydrogen DTPA	LAH2DTPA
La[HC14H18N3O10]-1	Lanthanum(III) hydrogen DTPA ion(-1)	LAHDTPAION
La[HC4H4O5]+2	Lanthanum(III) hydrogen tartrate ion(+2)	LAHTARTRTION
La[HCOO]+2	Lanthanum(III) monoformate ion(+2)	LACOOHION
La[HCOO]2+1	Lanthanum(III) diformate ion(+1)	LACOOH2ION
La[HCOO]3	Lantanum(III) formate	LACOOH3
La+3	Lanthanide ion(+3)	LAION
La2(CO3)3	Lanthanum(III) carbonate	LA2CO33
La2(MoO4)3	Lanthanum(III) molybdate(VI)	LA2MOO43
La2(SO4)3.9H2O	Lanthanum(III) sulfate nonahydrate	LA2SO43.9H2O
La2(WO4)3	Lantanum(III) tungstate(VI)	LA2WO43
La2[C4H4O6]3	Lanthanum(III) tartrate	LA2TARTRT3
La2S3	Lanthanum(III) sulfide	LA2S3
LaCl+2	Lanthanum(III) monochloride ion(+2)	LACLION
LaCl2+1	Lanthanum(III) dichloride ion(+1)	LACL2ION
LaCl3	Lanthanum(III) chloride	LACL3
LaCl3.7H2O	Lanthanum(III) chloride heptahydrate	LACL3.7H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
LaCl4-1	Lanthanum(III) tetrachloride ion(-1)	LACL4ION
LaCO3+1	Lanthanum(III) carbonate ion(+1)	LACO3ION
LaF+2	Lanthanum(III) monofluoride ion(+2)	LAFION
LaF2+1	Lanthanum(III) difluoride ion(+1)	LAF2ION
LaF3	Lanthanum(III) fluoride	LAF3
LaF3.0.5H2O	Lanthanum(III) fluoride hemihydrate	LAF3.0.5H2O
LaF4-1	Lanthanum(III) tetrafluoride ion(-1)	LAF4ION
LaH2PO4+2	Lanthanum(III) dihydrogen orthophosphate ion(+2)	LAH2PO4ION
LaHCO3+2	Lanthanum(III) bicarbonate ion(+2)	LAHCO3ION
LaNO3+2	Lanthanum(III) mononitrate ion(+2)	LANO3ION
LaOH+2	Lanthanum(III) monohydroxide ion(+2)	LAOHION
LaPO4	Lanthanum(III) orthophosphate(V)	LAPO4
LaPO4.2H2O	Lanthanum(III) orthophosphate dihydrate	LAPO4.2H2O
LaSO4+1	Lanthanum(III) monosulfate ion(+1)	LASO4ION
Li	Lithium	LIEL
Li[B(C6H5)4]	Lithium tetraphenylborate	LIBPH4
Li[C10H12N2O8]-3	Lithium EDTA ion(-3)	LIEDTAION
Li[C14H18N3O10]-4	Lithium DTPA ion(-4)	LIDTPAION
Li[C2H3O2]	Lithium acetate	LIACET
Li[C2H3O2].2H2O	Lithium acetate dihydrate	LIACET.2H2O
Li[C2H3O3]	Lithium glycolate	LIGLYCOL
Li[C2H3O3]2-1	Lithium diglycolate ion(-1)	LIGLYCOL2ION
Li[C6H5O7]-2	Lithium citrate ion(-2)	LICTRTION
Li[C6H6NO6]-2	Lithium NTA ion(-2)	LINTAION
Li[H2C6H5O7]	Lithium dihydrogen citrate	LIH2CTRT
Li[H2C6H6NO6]	Lithium dihydrogen NTA	LIH2NTA
Li[H3C10H12N2O8]	Lithium trihydrogen EDTA	LIH3EDTA
Li[H4C14H18N3O10]	Lithium tetrahydrogen DTPA	LIH4DTPA
Li[HCOO]	Lithium formate	LICOOH
Li[HCOO].1H2O	Lithium formate monohydrate	LICOOH.1H2O
Li+1	Lithium ion(+1)	LIION
Li2C2O4	Lithium oxalate	LI2C2O4
Li2CO3	Lithium carbonate	LI2CO3
Li2CrO4	Lithium chromate(IV)	LI2CRO4
Li2CrO4.2H2O	Lithium chromate(IV) dihydrate	LI2CRO4.2H2O
Li2MoO4	Lithium molybdate(VI)	LIMO
Li2MoO4.0.75H2O	Lithium molybdate(VI)-0.75-water	LIMO.0.75H2O
Li2S	Lithium sulfide	LI2S

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Li2SO3	Lithium sulfite(IV)	LI2SO3
Li2SO4	Lithium sulfate(VI)	LI2SO4
Li2SO4.1H2O	Lithium sulfate(VI) monohydrate	LI2SO4.1H2O
Li2WO4	Lithium tungstate(VI)	LI2WO4
Li3VO4	Lithium orthovanadate(V)	LI3VO4
Li3VO4.1H2O	Lithium orthovanadate(V) monohydrate	LI3VO4.1H2O
Li3VO4.9H2O	Lithium orthovanadate(V) nonahydrate	LI3VO4.9H2O
LiBO2	Lithium metaborate	LIBO2
LiBO2.2H2O	Lithium metaborate dihydrate	LIBO2.2H2O
LiBO2.8H2O	Lithium metaborate octahydrate	LIBO2.8H2O
LiCl	Lithium chloride	LICL
LiCl.1H2O	Lithium chloride monohydrate	LICL.1H2O
LiCl.2H2O	Lithium chloride dihydrate	LICL.2H2O
LiClO	Lithium hypochlorite	LICLO
LiF	Lithium fluoride	LIF
LiH2BO3	Lithium dihydrogen orthoborate	LIH2BO3
LiHCO3	Lithium bicarbonate	LIHCO3
LiHS	Lithium bisulfide	LIHS
LiHSO3	Lithium bisulfite(IV)	LIHSO3
LiNbO3	Lithium niobate(V)	LINBO3
LiNH2CO2	Lithium carbamate	LINH2CO2
LiOH	Lithium hydroxide	LIOH
LiOH.1H2O	Lithium hydroxide monohydrate	LIOH.1H2O
LiSO4-1	Lithium sulfate(VI) ion(-1)	LISO4ION
LiTaO3	Lithium tantalate(V)	LITAO3
LiVO3	Lithium metavanadate(V)	LIVO3
Lu	Lutetium	LUEL
Lu(NO3)3	Lutetium(III) nitrate	LUNO33
Lu(OH)[C6H6NO6]-1	Lutetium(III) hydroxide NTA ion(-1)	LUOHNTAION
Lu(OH)2+1	Lutetium(III) dihydroxide ion(+1)	LUOH2ION
Lu(OH)3	Lutetium(III) hydroxide	LUOH3
Lu(OH)4-1	Lutetium(III) tetrahydroxide ion(-1)	LUOH4ION
Lu(SO4)2-1	Lutetium(III) disulfate ion(-1)	LUSO42ION
Lu[C10H12N2O8]-1	Lutetium(III) EDTA ion(-1)	LUEDTAION
Lu[C14H18N3O10]-2	Lutetium(III) DTPA ion(-2)	LUDTPAION
Lu[C2H3O2]+2	Lutetium(III) monoacetate ion(+2)	LUACETION
Lu[C2H3O2]2+1	Lutetium(III) diacetate ion(+1)	LUACET2ION
Lu[C2H3O2]3	Lutetium(III) acetate	LUACET3
Lu[C4H4O6]+1	Lutetium(III) monotartrate ion(+1)	LUTRTRTION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Lu[C6H5O7]	Lutetium(III) citrate	LUCTRT
Lu[C6H6NO6]	Lutetium(III) NTA	LUNTA
Lu[C6H6NO6]2-3	Lutetium(III) di-NTA ion(-3)	LUNTA2ION
Lu[H2C14H18N3O10]	Lutetium(III) dihydrogen DTPA	LUH2DTPA
Lu[HC10H12N2O8]	Lutetium(III) hydrogen EDTA	LUHEDTA
Lu[HC14H18N3O10]-1	Lutetium(III) hydrogen DTPA ion(-1)	LUHDTPAION
Lu+3	Lutetium ion(+3)	LUION
Lu2(CO3)3	Lutetium(III) carbonate	LU2CO33
Lu2(SO4)3	Lutetium(III) sulfate	LU2SO43
Lu2(SO4)3.8H2O	Lutetium(III) sulfate octahydrate	LU2SO43.8H2O
Lu2[C4H4O6]3	Lutetium(III) tartrate	LU2TRTRT3
LuCl+2	Lutetium(III) monochloride (+2)	LUCLION
LuCl2+1	Lutetium(III) dichloride ion(+1)	LUCL2ION
LuCl3	Lutetium(III) chloride	LUCL3
LuCl4-1	Lutetium(III) tetrachloride ion(-1)	LUCL4ION
LuCO3+1	Lutetium(III) carbonate ion(+1)	LUCO3ION
LuF+2	Lutetium(III) monofluoride ion(+2)	LUFION
LuF2+1	Lutetium(III) difluoride ion(+1)	LUF2ION
LuF3	Lutetium(III) fluoride	LUF3
LuF4-1	Lutetium(III) tetrafluoride ion(-1)	LUF4ION
LuH2PO4+2	Lutetium(III) dihydrogen orthophosphate ion(+2)	LUH2PO4ION
LuHCO3+2	Lutetium(III) bicarbonate ion(+2)	LUHCO3ION
LuNO3+2	Lutetium(III) mononitrate ion(+2)	LUNO3ION
LuOH+2	Lutetium(III) monohydroxide ion(+2)	LUOHION
LuSO4+1	Lutetium(III) monosulfate ion(+1)	LUSO4ION
Mg	Magnesium	MGEL
Mg(C2O4)2-2	Magnesium dioxalate ion(-2)	MGC2O42ION
Mg(HCO3)2	Magnesium bicarbonate	MGHCO32
Mg(HCO3)2	Magnesium bicarbonate bicarbonate	MGHCO3HCO3
Mg(HCO3)Cl	Magnesium bicarbonate chloride	MGHCO3CL
Mg(HS)2	Magnesium bisulfide	MGHS2
Mg(HSO3)2	Magnesium bisulfite(IV)	MGHSO32
Mg(HSO4)2	Magnesium bisulfate(VI)	MGHSO42
Mg(NH2CO2)2	Magnesium carbamate	MGNH2CO22
Mg(NO2)2	Magnesium nitrite(III)	MGNO22
Mg(NO3)2	Magnesium nitrate(V)	MGNO32
Mg(NO3)2.2H2O	Magnesium nitrate(V) dihydrate	MGNO32.2H2O
Mg(NO3)2.6H2O	Magnesium nitrate hexahydrate	MGNO32.6H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Mg(NO3)2.6H2O	Manganese(II) nitrate hexahydrate	MNNO32.6H2O
Mg(OH)2	Magnesium hydroxide	MGOH2
Mg(TcO4)2	Magnesium pertechnetate	MGTCVIIO42
Mg[C10H12N2O8]-2	Magnesium EDTA ion(-2)	MGEDTAION
Mg[C10H14N2O8]	Magnesium dihydrogen EDTA	MGH2EDTA
Mg[C14H18N3O10]-3	Magnesium DTPA ion(-3)	MGDTPAION
Mg[C2H3O2]+1	Magnesium monoacetate ion(+1)	MGACETION
Mg[C2H3O2]2	Magnesium acetate	MGACET2
Mg[C2H3O2]2.4H2O	Magnesium acetate tetrahydrate	MGACET2.4H2O
Mg[C2H3O3]+1	Magnesium monoglycolate ion(+1)	MGGLYCOLION
Mg[C2H3O3]2	Magnesium glycolate	MGGLYC2
Mg[C2H4NO2]+1	Magnesium monoglycine ion(+1)	MGGLYCINION
Mg[C2H4NO2]2	Magnesium diglycine	MGGLYCIN2
Mg[C2H5COO]+1	Magnesium monopropanate ion(+1)	MGPROPION
Mg[C2H5COO]2	Magnesium propanate	MGPROP2
Mg[C3H6NO2]+1	Magnesium mono(L-alpha-alanine) ion(+1)	MGALANION
Mg[C3H6NO2]2	Magnesium di(L-alpha-alanine)	MGALAN2
Mg[C4H4O6]	Magnesium tartrate	MGTRT
Mg[C6H5COO]+1	Magnesium benzoate ion(+1)	MGBNZATION
Mg[C6H5COO]2	Magnesium benzoate	MGBNZT2
Mg[C6H5COO]2.4H2O	Magnesium benzoate tetrahydrate	MGBNZT2.4H2O
Mg[C6H5O7]-1	Magnesium citrate ion(-1)	MGCTRTION
Mg[C6H6NO6]-1	Magnesium NTA ion(-1)	MGNTAION
Mg[COOH]2	Magnesium formate	MGCOOH2
Mg[Fe(CN)6]-2	Magnesium monoferrocyanide(II) ion(-2)	MGFEIICN6ION
Mg[H2C6H5O7]+1	Magnesium dihydrogen citrate ion(+1)	MGH2CTRTION
Mg[H3C14H18N3O10]	Magnesium trihydrogen DTPA	MGH3DTPA
Mg[HC10H12N2O8]-1	Magnesium hydrogen EDTA ion(-1)	MGHEDTAION
Mg[HC14H18N3O10]-2	Magnesium hydrogen DTPA ion(-2)	MGHDTPAION
Mg[HC4H4O6]+1	Magnesium hydrogen tartrate ion(+1)	MGHTARTRTION
Mg[HC6H5O7]	Magnesium hydrogen citrate	MGHCTRT
Mg[HC6H6NO6]	Magnesium hydrogen NTA	MGHNTA
Mg[HCOO]+1	Magnesium monoformate ion (+1)	MGCOOHION
Mg[HCOO]2.2H2O	Magnesium formate dihydrate	MGCOOH2.2H2O
Mg+2	Magnesium ion(+2)	MGION
Mg1.25(SO4)(OH)0.5.0.5H2O	Magnesium sulfate-0.25-(magnesium hydroxide)-hemihydrate	MGSO4OH.0.5H2O
Mg1.5(SO4)(OH)	Magnesium sulfate-0.5-(magnesium hydroxide)	MGSO4OH

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Mg2[FeII(CN)6]	Magnesium ferrocyanide(II)	MG2FEIICN6
Mg2Al2SiO5(OH)4	Dimagnesium dialuminum silicon pentaoxide tetrahydroxide	AMESITE7A
Mg3(PO4)2	Magnesium orthophosphate(V)	MG3PO42
Mg3(PO4)2.8H2O	Magnesium orthophosphate(V) octahydrate	MG3PO42.8H2O
Mg4Al4Si2O10(OH)8	Tetramagnesium tetraaluminum disilicon decaoxide octahydroxide	AMESITE14A
Mg7Si8O22(OH)2	Cumtonite	CUMTONITE
MgBr2	Magnesium bromide	MGBR2
MgBr2.6H2O	Magnesium bromide hexahydrate	MGBR2.6H2O
MgC2O4	Magnesium oxalate	MGC2O4
MgC2O4.2H2O	Magnesium oxalate dihydrate	MGC2O4.2H2O
MgCl2	Magnesium chloride	MGCL2
MgCl2.2H2O	Magnesium chloride dihydrate	MGCL2.2H2O
MgCl2.4H2O	Magnesium chloride tetrahydrate	MGCL2.4H2O
MgCl2.6H2O	Magnesium chloride hexahydrate	MGCL2.6H2O
MgClHCO3	Magnesium chloride bicarbonate	MGCLHCO3
MgClHS	Magnesium chloride bisulfide	MGCLHS
MgClHSO4	Magnesium chloride bisulfate(VI)	MGCLHSO4
MgClOH	Magnesium chloride hydroxide	MGCLOH
MgCO3	Magnesium carbonate	MGCO3
MgCO3.3H2O	Magnesium carbonate trihydrate	MGCO3.3H2O
MgCr2O7	Magnesium dichromate(VI)	MGCR2O7
MgCr2O7.5H2O	Magnesium dichromate(VI) pentahydrate	MGCR2O7.5H2O
MgCr2O7.6H2O	Magnesium dichromate(VI) hexahydrate	MGCR2O7.6H2O
MgCrO4	Magnesium chromate(VI)	MGCRO4
MgF+1	Magnesium monofluoride ion(+1)	MGFION
MgF2	Magnesium fluoride	MGF2
MgH2PO4+1	Magnesium dihydrogen orthophosphate(V) ion(+1)	MGH2PO4ION
MgHCO3+1	Magnesium bicarbonate ion(+1)	MGHCO3ION
MgHCO3HS	Magnesium bicarbonate bisulfide	MGHCO3HS
MgHCO3HSO4	Magnesium bicarbonate bisulfate(VI)	MGHCO3HSO4
MgHCO3OH	Magnesium bicarbonate hydroxide	MGHCO3OH
MgHPO4	Magnesium hydrogen orthophosphate(V)	MGHPO4
MgHSiO3+1	Magnesium hydrogen metasilicate ion(+1)	MGHSIO3ION
MgI2	Magnesium iodide	MGI2
MgI2.6H2O	Magnesium iodide hexahydrate	MGI2.6H2O
MgI2.8H2O	Magnesium iodide octahydrate	MGI2.8H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
MgMoO4	Magnesium molybdate(VI)	MGMOO4
MgMoO4.2H2O	Magnesium molybdate(VI) dihydrate	MGMOO4.2H2O
MgMoO4.5H2O	Magnesium molybdate(VI) pentahydrate	MGMOO4.5H2O
MgMoO4.7H2O	Magnesium molybdate(VI) heptahydrate	MGMOO4.7H2O
MgOH+1	Magnesium hydroxide ion(+1)	MGOHION
MgP2O7-2	Magnesium pyrophosphate(V) ion(-2)	MGP2O7ION
MgPO4-1	Magnesium orthophosphate(V) ion(-1)	MGPO4ION
MgS	Magnesium sulfide	MGS
MgSeO3	Magnesium selenite(IV)	MGSEO3
MgSeO3.6H2O	Magnesium selenite(IV) hexahydrate	MGSEO3.6H2O
MgSeO4	Magnesium selenate(VI)	MGSEO4
MgSeO4.4H2O	Magnesium selenate(VI) tetrahydrate	MGSEO4.4H2O
MgSeO4.6H2O	Magnesium selenate(VI) hexahydrate	MGSEO4.6H2O
MgSeO4.H2O	Magnesium selenate(VI) monohydrate	MGSEO4.1H2O
MgSiO2(OH)2	Magnesium dihydrogen orthosilicate	MGH2SIO4
MgSO3	Magnesium sulfite	MGSO3
MgSO3.3H2O	Magnesium sulfite trihydrate	MGSO3.3H2O
MgSO3.6H2O	Magnesium sulfite hexahydrate	MGSO3.6H2O
MgSO4	Magnesium sulfate	MGSO4
MgSO4.1H2O	Magnesium sulfate monohydrate	MGSO4.1H2O
MgSO4.6H2O	Magnesium sulfate hexahydrate	MGSO4.6H2O
MgSO4.7H2O	Magnesium sulfate heptahydrate	MGSO4.7H2O
MgTeO3	Magnesium tellurite(IV)	MGTEO3
MgTeO3.5H2O	Magnesium tellurite(IV) pentahydrate	MGTEO3.5H2O
MgTeO3.6H2O	Magnesium tellurite(IV) hexahydrate	MGTEO3.6H2O
MgWO4	Magnesium tungstate(VI)	MGWO4
Mn	Manganese	MNEL
Mn(C2O4)2-2	Manganese(II) dioxalate ion(-2)	MNC2O42ION
Mn(C2O4)3-4	Manganese(II) trioxalate ion(-4)	MNC2O43ION
Mn(HCO3)2	Manganese(II) bicarbonate	MNHCO32
Mn(HS)2	Manganese(II) bisulfide	MNHS2
Mn(HSO3)2	Manganese(II) bisulfite	MNHSO32
Mn(HSO4)3	Manganese(II) bisulfate	MNHSO42
Mn(NH2CO2)2	Manganese(II) carbamate	MNNH2CO22
Mn(NO3)2	Manganese(II) nitrate	MNNO32
Mn(NO3)2.1H2O	Manganese(II) nitrate monohydrate	MNNO32.1H2O
Mn(NO3)2.4H2O	Manganese(II) nitrate tetrahydrate	MNNO32.4H2O
Mn(OH)+1	Manganese(II) monohydroxide ion (+1)	MNOHION
Mn(OH)2	Manganese(II) hydroxide	MNOH2

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Mn(OH)3-1	Manganese(II) trihydroxide ion(-1)	MNOH3ION
Mn(OH)4-2	Manganese(II) tetrahydroxide ion(-2)	MNOH4ION
Mn(VO3)2	Manganese(II) metavanadate	MNVO32
Mn[C10H12N2O8]-2	Manganese(II) EDTA ion(-2)	MNEDTAION
Mn[C10H14N2O8]	Manganese(II) dihydrogen EDTA	MNH2EDTA
Mn[C14H18N3O10]-3	Manganese(II) DTPA ion(-3)	MNDTPAION
Mn[C2H3O2]+1	Manganese(II) monoacetate ion(+1)	MNACETION
Mn[C2H3O2]2	Manganese(II) acetate	MNACET2
Mn[C2H3O2]3-1	Manganese(II) triacetate ion(-1)	MNACET3ION
Mn[C2H3O3]+1	Manganese(II) monoglycolate ion(+1)	MNGLYCOLION
Mn[C2H3O3]2	Manganese(II) glycolate	MNGLYCOL2
Mn[C2H4NO2]+1	Manganese(II) monoglycine ion(+1)	MNGLYCINION
Mn[C2H4NO2]2	Manganese(II) diglycine	MNGLYCIN2
Mn[C2H8N2]+2	Manganese(II) monoethylenediamine ion(+2)	MNEDAION
Mn[C2H8N2]2+2	Manganese(II) di(ethylenediamine) ion(+2)	MNEDA2ION
Mn[C3H6NO2]+1	Manganese(II) mono(L-alpha-alanine) ion(+1)	MNALANION
Mn[C3H6NO2]2	Manganese(II) di(L-alpha-alanine)	MNALAN2
Mn[C4H4O6]	Manganese(II) tartrate	MNTARTRT
Mn[C6H5O7]-1	Manganese(II) citrate ion(-1)	MNCTRTION
Mn[C6H6NO6]-1	Manganese(II) NTA ion(-1)	MNNTAION
Mn[C6H6NO6]2-4	Manganese(II) di-NTA ion(-4)	MNNTA2ION
Mn[H3C14H18N3O10]	Manganese(II) trihydrogen DTPA	MNH3DTPA
Mn[HC10H12N2O8]-1	Manganese(II) hydrogen EDTA ion(-1)	MNHEDTAION
Mn[HC14H18N3O10]-2	Manganese(II) hydrogen DTPA ion(-2)	MNHDTPAION
Mn[HC6H5O7]	Manganese(II) hydrogen citrate	MNHCTRT
Mn[HC6H6NO6]	Manganese(II) hydrogen NTA	MNHNTA
Mn[HCOO]+1	Manganese(II) monoformate ion(+1)	MNCOOHION
Mn[HCOO]2	Manganese(II) formate	MNCOOH2
Mn+2	Manganese ion(+2)	MNION
Mn2[C14H18N3O10]-1	Dimanganese(II) DTPA ion(-1)	MN2DTPAION
Mn3(PO4)2	Manganese(II) orthophosphate	MN3PO42
Mn3(PO4)2.6H2O	Manganese(II) orthophosphate hexahydrate	MN3PO42.6H2O
Mn3PO42.3H2O	Manganese(II) orthophosphate trihydrate	MN3PO42.3H2O
MnBr+1	Manganese(II) monobromide ion(+1)	MNBRION
MnBr2	Manganese(II) bromide	MNBR2
MnBr2.2H2O	Manganese(II) bromide dihydrate	MNBR2.2H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
MnBr2.4H2O	Manganese(II) bromide tetrahydrate	MNBR2.4H2O
MnC2O4	Manganese(II) oxalate	MNC2O4
MnC2O4.2H2O	Manganese(II) oxalate dihydrate	MNC2O4.2H2O
MnCl+1	Manganese(II) monochloride ion(+1)	MNCLION
MnCl2	Manganese(II) chloride	MNCL2
MnCl2.1H2O	Manganese(II) chloride monohydrate	MNCL2.1H2O
MnCl2.2H2O	Manganese(II) chloride dihydrate	MNCL2.2H2O
MnCl2.4H2O	Manganese(II) chloride tetrahydrate	MNCL2.4H2O
MnCO3	Manganese(II) carbonate	MNCO3
MnF2	Manganese(II) fluoride	MNF2
MnF2.4H2O	Manganese(II) fluoride tetrahydrate	MNF2.4H2O
MnI2	Manganese(II) iodide	MNI2
MnI2.4H2O	Manganese(II) iodide tetrahydrate	MNI2.4H2O
MnMoO4	Manganese(II) molybdate(VI)	MNMOO4
MnNO3+1	Manganese(II) nitrate ion(+1)	MNNO3ION
MnO4-1	Manganate ion(-1)	MNVIIO4ION
MnO4-2	Manganate(VI) ion(-2)	MNO4ION
MnOHCl		MNOHCL
MnOHHCO3	Manganese(II) hydroxide bicarbonate	MNOHHCO3
MnS	Manganese(II) sulfide	MNS
MnSe	Manganese(II) selenide	MNSE
MnSeO4	Manganese(II) selenate	MNSEO4
MnSeO4.H2O	Manganese(II) selenate monohydrate	MNSEO4.1H2O
MnSO3	Manganese(II) sulfite	MNSO3
MnSO4	Manganese(II) sulfate	MNSO4
MnSO4.1H2O	Manganese(II) sulfate monohydrate	MNSO4.1H2O
MnSO4.5H2O	Manganese(II) sulfate pentahydrate	MNSO4.5H2O
MnSO4.7H2O	Manganese(II) sulfate heptahydrate	MNSO4.7H2O
MnWO4	Manganese(II) tungstate(VI)	MNWO4
Mo	Molybdenum	MOEL
MoO2	Molybdenum(IV) oxide	MOO2
MoO3	Molybdenum(VI) oxide	MOO3
MoO4-2	Molybdenate(VI) ion(-2)	MOO4ION
N2	Nitrogen	N2
N2H4	Hydrazine	N2H4
N2H5+1	Hydrogen hydrazine ion(+1)	N2H5ION
N2O	Nitrous oxide	N2O
N2O4	Dinitrogen tetroxide	N2O4
Na	Sodium	NAEL

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Na[B(C6H5)4]	Sodium tetraphenylborate	NABPH4
Na[C10H12N2O8]-3	Sodium EDTA ion(-3)	NAEDTAION
Na[C2H3O2]	Sodium acetate	NAACET
Na[C2H3O2].3H2O	Sodium acetate trihydrate	NAACET.3H2O
Na[C2H3O3]	Sodium glycolate	NAGLYCOLAT
Na[C3H5O2]	Sodium propanate	NAPROP
Na[C3H5O3]	Sodium lactate	NALACTAT
Na[C4H4O4]-1	Sodium succinate ion	NASUCCNATION
Na[C4H4O6]-1	Sodium tartrate ion(-1)	NATARTRTION
Na[C6H5COO]	Sodium benzoate	NABNZAT
Na[C6H5O7]-2	Sodium citrate ion(-2)	NACTRTION
Na[C6H6NO6]-2	Sodium NTA ion(-2)	NANTAION
Na[H2C6H5O7]	Sodium dihydrogen citrate	NAH2CTRT
Na[H2C6H6NO6]	Sodium dihydrogen NTA	NAH2NTA
Na[HC10H14N2O8]	Sodium trihydrogen EDTA	NAH3EDTA
Na[HC4H4O6]	Sodium hydrogen tartrate	NAHTARTRT
Na+1	Sodium ion(+1)	NAION
Na2[C4H4O4]	Sodium succinate	NA2SUCCNAT
Na2[C4H4O4]	Sodium succinate	NA2SUC
Na2[C4H4O4].6H2O	Sodium succinate hexahydrate	NA2SUC.6H2O
Na2[H2C10H12N2O8]	Disodium dihydrogen EDTA	NA2H2EDTA
Na2[PtCl6]	Sodium hexachloroplatinate(IV)	NAPTCL6
Na2[PtCl6].6H2O	Sodium hexachloroplatinate(IV) hexahydrate	NAPTCL6.6H2O
Na2Al2Si3O10.2H2O	Disodium dialuminum trisilicon decaoxide dihydrate	NATROLITE
Na2Al2Si5O14.5H2O	Sodium aluminum silicate pentahydrate	NAPHILL
Na2B4O7	Sodium tetraborate	NA2B4O7
Na2B4O7.10H2O	Sodium tetraborate decahydrate	NA2B4O7.10H2O
Na2B4O7.4H2O	Sodium tetraborate tetrahydrate	NA2B4O7.4H2O
Na2B4O7.5H2O	Sodium tetraborate pentahydrate	NA2B4O7.5H2O
Na2C2O4	Sodium oxalate	NA2C2O4
Na2CO3	Sodium carbonate	NA2CO3
Na2CO3.10H2O	Sodium carbonate decahydrate	NA2CO3.10H2O
Na2CO3.1H2O	Sodium carbonate monohydrate	NA2CO3.1H2O
Na2CO3.7H2O	Sodium carbonate heptahydrate	NA2CO3.7H2O
Na2Cr2O7	Sodium bichromate	NA2CR2O7
Na2Cr2O7.2H2O	Sodium dichromate dihydrate	NA2CR2O7.2H2O
Na2CrO4	Sodium chromate(VI)	NA2CRO4
Na2CrO4.10H2O	Sodium chromate(VI) decahydrate	NA2CRO4.10H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Na2CrO4.4H2O	Sodium chromate(VI) tetrahydrate	NA2CRO4.4H2O
Na2CrO4.6H2O	Sodium chromate(VI) hexahydrate	NA2CRO4.6H2O
Na2F+1	Disodium fluoride ion(+1)	NA2FION
Na2H4TeO6	Disodium tetrahydrogen tellurate(VI)	NA2H4TEO6
Na2HAsO4	Sodium biarsenate	NA2HASO4
Na2HPO4	Sodium hydrogen orthophosphate	NA2HPO4
Na2HPO4.12H2O	Sodium hydrogen orthophosphate dodecahydrate	NA2HPO4.12H2O
Na2HPO4.2H2O	Sodium hydrogen orthophosphate dihydrate	NA2HPO4.2H2O
Na2HPO4.7H2O	Sodium hydrogen orthophosphate heptahydrate	NA2HPO4.7H2O
Na2MoO4	Sodium molybdate(VI)	NA2MOO4
Na2MoO4.10H2O	Sodium molybdate(VI) decahydrate	NA2MOO4.10H2O
Na2MoO4.2H2O	Sodium molybdate(VI) dihydrate	NA2MOO4.2H2O
Na2O.Al2O3	Sodium aluminum oxide	NAALO22
Na2O.Al2O3.2.5H2O	Sodium aluminum oxide 2.5 hydrate	NAALO22.2.5H2O
Na2S	Sodium sulfide	NA2S
Na2S.9H2O	Sodium sulfide nonahydrate	NA2S.9H2O
Na2S2O3	Sodium thiosulfate	NA2S2O3
Na2S2O3.2H2O	Sodium thiosulfate dihydrate	NA2S2O3.2H2O
Na2S2O3.5H2O	Sodium thiosulfate pentahydrate	NA2S2O3.5H2O
Na2S5	Disodium pentasulfide	NA2S5
Na2Se	Sodium selenide	NA2SE
Na2SeO3	Sodium selenite(IV)	NA2SEO3
Na2SeO3.5H2O	Sodium selenite(IV) pentahydrate	NA2SEO3.5H2O
Na2SeO4	Sodium selenate(VI)	NA2SEO4
Na2SeO4.10H2O	Sodium selenate(VI) decahydrate	NA2SEO4.10H2O
Na2SO3	Sodium sulfite	NA2SO3
Na2SO3.7H2O	Sodium sulfite heptahydrate	NA2SO3.7H2O
Na2SO4	Sodium sulfate	NA2SO4
Na2SO4.(NH4)2SO4	Sodium ammonium sulfate	NANH4SO4
Na2SO4.(NH4)2SO4.4H2O	Sodium ammonium sulfate tetrahydrate	NANH4SO4.4H2O
Na2SO4.10H2O	Sodium sulfate decahydrate	NA2SO4.10H2O
Na2SO4.NaHSO4	Sodium sulfate bisulfate	NA3HSO42
Na2Te	Sodium telluride	NA2TE
Na2TeO3	Sodium tellurite(IV)	NA2TEO3
Na2TeO3.5H2O	Sodium tellurite(IV) pentahydrate	NA2TEO3.5H2O
Na2TeO4	Sodium tellurate(VI)	NA2TEO4

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Na2WO4	Sodium tungstate(VI)	NA2WO4
Na2WO4.2H2O	Sodium tungstate(VI) dihydrate	NA2WO4.2H2O
Na2ZrF6	Disodium hexafluorozirconate	NA2ZRF6
Na3AsO4	Sodium arsenate(V)	NA3ASO4
Na3PO4	Sodium orthohosphate	NA3PO4
Na3PO4.0.25NaOH	Sodium orthophosphate hydroxide	NAPHOH
Na3PO4.0.25NaOH.12H2O	Sodium orthophosphate hydroxide dodecahydrate	NAPHOH.12H2O
Na3PO4.1H2O	Sodium orthophosphate monohydrate	NA3PO4.1H2O
Na3PO4.6H2O	Sodium orthophosphate hexahydrate	NA3PO4.6H2O
Na3PO4.8H2O	Sodium orthophosphate octahydrate	NA3PO4.8H2O
Na3VO4	Sodium orthovanadate(V)	NA3VO4
Na4P2O7	Sodium pyrophosphate(V)	NA4P2O7
Na4P2O7.10H2O	Sodium pyrophosphate decahydrate	NA4P2O7.10H2O
Na5P3O10	Pentasodium triphosphorous decaoxide	NA5P3O10
Na5P3O10.6H2O	Pentasodium triphosphorous decaoxide hexahydrate	NA5P3O10.6H2O
Na7F(PO4)2	Heptasodium fluoride diphosphate	NAFPO4
Na7F(PO4)2.19H2O	Heptasodium fluoride diphosphate nonadecahydrate	NAFPO4.19H2O
NaAlCO3(OH)2	Sodium aluminum dihydroxide carbonate	NAALCO3OH2
NaALO2	Sodium aluminate	NAALO2
NaB(OH)4	Sodium boron hydroxide	NABOH4
NaB5O8	Sodium pentaborate	NAB5O8
NaB5O8.5H2O		NAB5O8.5H2O
NaBO2	Sodium metaborate	NABO2
NaBO2.0.5H2O	Sodium metaborate hemihydrate	NABO2.0.5H2O
NABO2.2H2O	Sodium metaborate dihydrate	NABO2.2H2O
NaBO2.4H2O	Sodium metaborate tetrahydrate	NABO2.4H2O
NaBr	Sodium bromide	NABR
NaBr.2H2O	Sodium bromide dihydrate	NABR.2H2O
NaCl	Sodium chloride	NACL
NaClO	Sodium hypochlorite	NACLO
NaClO2	Sodium chlorite	NACLO2
NaClO2.3H2O	Sodium chlorite trihydrate	NACLO2.3H2O
NaClO3	Sodium chlorate(V)	NACLO3
NaClO4	Sodium perchlorate(VII)	NACLO4
NaClO4.1H2O	Sodium perchlorate(VII) monohydrate	NACLO4.1H2O
NaCN	Sodium cyanide	NACN
NaCN.2H2O	Sodium cyanide dihydrate	NACN.2H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
NaCNO	Sodium cyanate	NACNO
NaCO3-1	Sodium carbonate ion(-1)	NACO3ION
NaCOOH	Sodium formate	NACOOH
NaCOOH.2H2O	Sodium formate dihydrate	NACOOH.2H2O
NaCOOH.3H2O	Sodium formate trihydrate	NACOOH.3H2O
NaF	Sodium fluoride	NAF
NaF.Na2SO4	Sodium fluoride sulfate	NA3FSO4
NaH[C4H4O4]	Sodium hydrogen succinate	NAHSUCCNAT
NaH[C4H4O4]	Sodium hydrogen succinate	NAHSUC
NaH[C4H4O4].3H2O	Sodium hydrogen succinate trihydrate	NAHSUC.3H2O
NaH2BO3	Sodium dihydrogen orthoborate	NAH2BO3
NaH2PO4	Sodium dihydrogen orthoporthohosphate	NAH2PO4
NaH2PO4.1H2O	Sodium dihydrogen orthophosphate monohydrate	NAH2PO4.1H2O
NaH2PO4.2H2O	Sodium dihydrogen orthophosphate dihydrate	NAH2PO4.2H2O
NaHCO3	Sodium bicarbonate	NAHCO3
NaHF2	Sodium hydrogen difluoride	NAHF2
NaHS	Sodium bisulfide	NAHS
NaHSiO3	Sodium hydrogen metasilicate	NAHSIO3
NaHSO3	Sodium bisulfite	NAHSO3
NaHSO4	Sodium bisulfate	NAHSO4
NaI	Sodium iodide	NAI
NaI.2H2O	Sodium iodide dihydrate	NAI.2H2O
NaIO3	Sodium iodate	NAIO3
NaIO3.1H2O	Sodium iodate monohydrate	NAIO3.1H2O
NaIO3.5H2O	Sodium iodate pentahydrate	NAIO3.5H2O
NaMnO4	Sodium permanganate(VII)	NAMNO4
NaMnO4.1H2O	Sodium permanganate(VII) monohydrate	NAMNO4.1H2O
NaMnO4.3H2O	Sodium permanganate(VII) trihydrate	NAMNO4.3H2O
NaNbO3	Sodium niobium trioxide	NANBO3
NaNH2CO2	Sodium carbamate	NANH2CO2
NaNO2	Sodium nitrite	NANO2
NaNO3	Sodium nitrate	NANO3
NaOH	Sodium hydroxide	NAOH
NaOH.1H2O	Sodium hydroxide monohydrate	NAOH.1H2O
NaS2O3-1	Sodium thiosulfate(II) ion(-1)	NAS2O3ION
NaSCN	Sodium thiocyanate	NASCN
NaSCN.1H2O	Sodium thiocyanate monohydrate	NASCN.1H2O
NaSO4-1	Sodium sulfate ion(-1)	NASO4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
NaTaO3	Sodium tantalate(V)	NATAO3
NaTcO4	Sodium pertechnetate(VII)	NATCVIIO4
NaVO3	Sodium metavanadate(V)	NAVO3
NaZrF5	Sodium pentafluorozirconate	NAZRF5
NaZrF5.1H2O	Sodium pentafluorozirconate monohydrate	NAZRF5.1H2O
Nb	Niobium	NBEL
Nb2O5	Niobium(V) oxide	NB2O5
NbBr5	Niobium(V) bromide	NBBR5
NbCl5	Niobium(V) chloride	NBCL5
NbF5	Niobium(V) fluoride	NBF5
NbI5	Niobium(V) iodide	NBI5
NbO3-1	Niobate(V) ion(-1)	NBO3ION
NbOCl3	Niobium(V) oxychloride	NBOCL3
Nd	Neodymium	NDEL
Nd(NO3)3	Neodymium(III) nitrate	NDNO33
Nd(NO3)3.6H2O	Neodymium(III) nitrate hexahydrate	NDNO33.6H2O
Nd(OH)[C6H6NO6]-1	Neodymium(III) hydroxide NTA ion(-1)	NDOHNTAION
Nd(OH)2+1	Neodymium(III) dihydroxide ion(+1)	NDOH2ION
Nd(OH)3	Neodymium(III) hydroxide	NDOH3
Nd(OH)4-1	Neodymium(III) tetrahydroxide ion(-1)	NDOH4ION
Nd(SO4)2-1	Neodymium(III) disulfate ion(-1)	NDSO42ION
Nd[C10H12N2O8]-1	Neodymium(III) EDTA ion(-1)	NDEDTAION
Nd[C14H18N3O10]-2	Neodymium(III) DTPA ion(-2)	NDDTPAION
Nd[C2H3O2]+2	Neodymium(III) monoacetate ion(+2)	NDACETION
Nd[C2H3O2]2+1	Neodymium(III) diacetate ion(+1)	NDACET2ION
Nd[C2H3O2]3	Neodymium(III) acetate	NDACET3
Nd[C4H4O6]+1	Neodymium(III) tartrate ion(+1)	NDTRTRTION
Nd[C6H5O7]	Neodymium(III) citrate	NDCTRT
Nd[C6H6NO6]	Neodymium(III) NTA	NDNTA
Nd[C6H6NO6]2-3	Neodymium(III) di-NTA ion(-3)	NDNTA2ION
Nd[H2C14H18N3O10]	Neodymium(III) dihydrogen DTPA	NDH2DTPA
Nd[HC10H12N2O8]	Neodymium(III) hydrogen EDTA	NDHEDTA
Nd[HC14H18N3O10]-1	Neodymium(III) hydrogen DTPA ion(-1)	NDHDTPAION
Nd+3	Neodymium ion(+3)	NDION
Nd2(CO3)3	Neodymium(III) carbonate	ND2CO33
Nd2(SO4)3	Neodymium(III) sulfate	ND2SO43
Nd2(SO4)3.8H2O	Neodymium(III) sulfate octahydrate	ND2SO43.8H2O
Nd2(WO4)3	Neodymium(III) tungstate(V)	ND2WO43

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Nd2[C4H4O6]3	Neodymium(III) tartrate	ND2TRTRT3
NdBr3	Neodymium(III) bromide	NDBR3
NdCl+2	Neodymium(III) monochloride ion(+2)	NDCLION
NdCl2+1	Neodymium(III) dichloride ion(+1)	NDCL2ION
NdCl3	Neodymium(III) chloride	NDCL3
NdCl3.6H2O	Neodymium(III) chloride hexahydrate	NDCL3.6H2O
NdCl4-1	Neodymium(III) tetrachloride ion(-1)	NDCL4ION
NdCO3+1	Neodymium(III) carbonate ion(+1)	NDCO3ION
NdF+2	Neodymium(III) monofluoride ion(+2)	NDFION
NdF2+1	Neodymium(III) difluoride ion(+1)	NDF2ION
NdF3	Neodymium(III) fluoride	NDF3
NdF4-1	Neodymium(III) tetrafluoride ion(-1)	NDF4ION
NdH2PO4+2	Neodymium(III) dihydrogen orthophosphate ion(+2)	NDH2PO4ION
NdHCO3+2	Neodymium(III) bicarbonate ion(+2)	NDHCO3ION
NdI3	Neodymium(III) iodide	NDI3
NdNO3+2	Neodymium(III) mononitrate ion(+2)	NDNO3ION
NdOH+2	Neodymium(III) monohydroxide ion(+2)	NDOHION
NdPO4	Neodymium(III) orthophosphate	NDPO4
NdPO4.2H2O	Neodymium(III) orthophosphate dihydrate	NDPO4.2H2O
NdSO4+1	Neodymium(III) monosulfate ion(+1)	NDSO4ION
Ne	Neon	NE
NH2CO2-1	Carbamate ion(-1)	NH2CO2ION
NH2OH	Hydroxylamine	HDROXAMN
NH2OH2+1	Hydrogen hydroxylamine ion(+1)	HHDRAMION
NH3	Ammonia	NH3
NH4[B(C6H5)4]	Ammonium tetraphenylborate	NH4BPH4
NH4[C2H3O2]	Ammonium acetate	NH4ACET
NH4[C3H5O3]	Ammonium lactate	NH4LACTAT
NH4[HCOO]	Ammonium formate	NH4COOH
NH4+1	Ammonium ion(+1)	NH4ION
NH4Cl	Ammonium chloride	NH4CL
NH4ClO4	Ammonium perchlorate	NH4CLO4
NH4CN	Ammonium cyanide	NH4CN
NH4F	Ammonium fluoride	NH4F
NH4H2PO4	Ammonium dihydrogen orthophosphate	NH4H2PO4
NH4HCO3	Ammonium bicarbonate	NH4HCO3
NH4HF2	Ammonium hydrogen difluoride	NH4HF2
NH4HS	Ammonium bisulfide	NH4HS

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
NH4HSO3	Ammonium bisulfite	NH4HSO3
NH4NO3	Ammonium nitrate	NH4NO3
NH4OH	Ammonium hydroxide	NH4OH
NH4SO4-1	Ammonium sulfate ion(-1)	NH4SO4ION
NH4VO3	Ammonium vanadate(V)	NH4VO3
Ni	Nickel	NIEL
Ni(C2O4)2-2	Nickel(II) dioxalate ion(-2)	NIC2O42ION
Ni(CN)2	Nickel(II) cyanide	NICN2
Ni(CN)4-2	Nickel(II) tetracyanide ion(-2)	NICN4ION
Ni(H2PO4)2	Nickel(II) dihydrogen orthophosphate	NIH2PO42
Ni(NH3)2+2	Nickel(II) diammonia ion(+2)	NINH32ION
Ni(NH3)3+2	Nickel(II) triammonia ion(+2)	NINH33ION
Ni(NH3)4+2	Nickel(II) tetraammonia ion(+2)	NINH34ION
Ni(NH3)5+2	Nickel(II) pentaammonia ion(+2)	NINH35ION
Ni(NH3)6+2	Nickel(II) hexaammonia ion(+2)	NINH36ION
Ni(NO3)2	Nickel(II) nitrate	NINO32
Ni(NO3)2.2H2O	Nickel(II) nitrate dihydrate	NINO32.2H2O
Ni(NO3)2.4H2O	Nickel(II) nitrate tetrahydrate	NINO32.4H2O
Ni(NO3)2.6H2O	Nickel(II) nitrate hexahydrate	NINO32.6H2O
Ni(OH)[C10H12N2O8]-3	Nickel(II) hydroxide EDTA ion(-3)	NIOHEDTAION
Ni(OH)2	Nickel(II) hydroxide	NIOH2
Ni(OH)3-1	Nickel(II) trihydroxide ion(-1)	NIOH3ION
Ni(SCN)2	Nickel(II) thiocyanate	NISCN2
Ni(SeCN)2	Nickel(II) selenocyanate	NISECN2
Ni[C10H12N2O8]-2	Nickel(II) EDTA ion(-2)	NIEDTAION
Ni[C10H14N2O8]	Nickel dihydrogen EDTA	NIH2EDTA
Ni[C14H18N3O10]-3	Nickel DTPA ion(-3)	NIDTPAION
Ni[C2H3O2]+1	Nickel monoacetate ion(+1)	NIACETION
Ni[C2H3O2]2	Nickel acetate	NIACET2
Ni[C2H3O2]3-1	Nickel triacetate ion(-1)	NIACET3ION
Ni[C2H3O3]+1	Nickel monoglycolate ion(+1)	NIGLYCOLION
Ni[C2H3O3]2	Nickel diglycolate	NIGLYCOL2
Ni[C2H4NO2]+1	Nickel monoglycine ion(+1)	NIGLYCINION
Ni[C2H4NO2]2	Nickel diglycine	NIGLYCIN2
Ni[C2H7NO]+2	Nickel mono(2-aminoethanol) ion(+2)	NIMEXHION
Ni[C2H7NO]2+2	Nickel di(2-aminoethanol) ion(+2)	NIMEXH2ION
Ni[C2H7NO]3+2	Nickel tri(2-aminoethanol) ion(+2)	NIMEXH3ION
Ni[C2H8N2]+2	Nickel monoethylenediamine ion(+2)	NIEDAION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ni[C2H8N2]2+2	Nickel di(ethylenediamine) ion(+2)	NIEDA2ION
Ni[C2H8N2]3+2	Nickel tri(ethylenediamine) ion (+2)	NIEDA3ION
Ni[C3H6NO2]+1	Nickel mono(L-alpha-alanine) ion(+1)	NIALANION
Ni[C3H6NO2]2	Nickel di(L-alpha-alanine)	NIALAN2
Ni[C6H15NO3]+2	Nickel triethanolamine ion(+2)	NITEXHION
Ni[C6H15NO3]2+2	Nickel di(triethanolamine) ion(+2)	NITEXH2ION
Ni[C6H5O7]-1	Nickel citrate ion(-1)	NICTRTION
Ni[C6H6NO6]-1	Nickel mono-NTA ion(-1)	NINTAION
Ni[C6H6NO6]-4	Nickel di-NTA ion(-4)	NINTA2ION
Ni[H2C14H18N3O10]-1	Nickel dihydrogen DTPA ion(-1)	NIH2DTPAION
Ni[H2C6H5O7]+1	Nickel dihydrogen citrate ion(+1)	NIH2CTRTION
Ni[H3C14H18N3O10]	Nickel trihydrogen DTPA	NIH3DTPA
Ni[HC10H12N2O8]-1	Nickel hydrogen EDTA ion(-1)	NIHEDTAION
Ni[HC14H18N3O10]-2	Nickel hydrogen DTPA ion(-2)	NIHDTPAION
Ni[HC6H5O7]	Nickel hydrogen citrate	NIHCTRT
Ni[HC6H6NO6]	Nickel hydrogen NTA	NIHNTA
Ni[HCOO]+1	Nickel(II) monoformate ion(+1)	NICOOHION
Ni[HCOO]2	Nickel(II) formate	NICOOH2
Ni+2	Nickel ion(+2)	NIION
Ni2[C14H18N3O10]-1	Dinickel DTPA ion(-1)	NI2DTPAION
Ni3(PO4)2	Nickel orthophosphate	NI3PO42
NiBr2	Nickel(II) bromide	NIBR2
NiBr2.6H2O	Nickel(II) bromide hexahydrate	NIBR2.6H2O
NiC2O4	Nickel(II) oxalate	NIC2O4
NiC2O4.2H2O	Nickel(II) oxalate dihydrate	NIC2O4.2H2O
NiCl+1	Nickel(II) monochloride ion(+1)	NICLION
NiCl2	Nickel(II) chloride	NICL2
NiCl2.2H2O	Nickel(II) chloride dihydrate	NICL2.2H2O
NiCl2.4H2O	Nickel(II) chloride tetrahydrate	NICL2.4H2O
NiCl2.6H2O	Nickel(II) chloride hexahydrate	NICL2.6H2O
NiCO3	Nickel(II) carbonate	NICO3
NiF+1	Nickel(II) monofluoride ion(+1)	NIFION
NiF2	Nickel(II) fluoride	NIF2
NiF2.4H2O	Nickel(II) fluoride tetrahydrate	NIF2.4H2O
NiHPO4	Nickel(II) hydrogen orthophosphate	NIHPO4
NiI2	Nickel(II) iodide	NII2
NiI2.4H2O	Nickel(II) iodide tetrahydrate	NII2.4H2O
NiI2.6H2O	Nickel(II) iodide hexahydrate	NII2.6H2O
NiMoO4	Nickel(II) molybdate(VI)	NIMOO4

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
NiNH3+2	Nickel(II) monoammonia ion(+2)	NINH3ION
NiNi(CN)4	Nickel(II) tetracyanonickel	NINICN4
NiNO3+1	Nickel(II) nitrate ion(+1)	NINO3ION
NiOH+1	Nickel(II) monohydroxide ion (+1)	NIOHION
NiS	Nickel(II) sulfide	NIS
NiSCN+1	Nickel(II) thiocyanate ion(+1)	NISCNION
NiSeCN+1	Nickel(II) selenocyanate ion(+1)	NISECNION
NiSeO3	Nickel(II) selenite(IV)	NISEO3
NiSeO4	Nickel(II) selenate(VI)	NISEO4
NiSeO4.4H2O	Nickel(II) selenate(VI) tetrahydrate	NISEO4.4H2O
NiSeO4.6H2O	Nickel(II) selenate(VI) hexahydrate	NISEO4.6H2O
NiSO4	Nickel(II) sulfate	NISO4
NiSO4.6H2O	Nickel(II) sulfate hexahydrate	NISO4.6H2O
NiSO4.7H2O	Nickel(II) sulfate heptahydrate	NISO4.7H2O
NiWO4	Nickel(II) tungstate(VI)	NIWO4
NO	Nitric oxide	NO
NO2	Nitrogen dioxide	NO2
NO2-1	Nitrite ion(-1)	NO2ION
NO3-1	Nitrate ion(-1)	NO3ION
Np(CO3)5-6	Neptunium(IV) pentacarbonate ion(-6)	NPIVCO35ION
Np(H2PO4)2+1	Neptunium(III) di(dihydrogen orthophosphate) ion(+1)	NPIIIH2PO42ION
Np(H2PO4)3	Neptunium(III) dihydrogen orthophosphate	NPIIIH2PO43
Np(HPO4)2	Neptunium(IV) hydrogen orthophosphate	NPIVHPO42
Np(HPO4)3-2	Neptunium(IV) tri(hydrogen orthophosphate) ion(-2)	NPIVHPO43ION
Np(HPO4)4-4	Neptunium(IV) tetra(hydrogen orthophosphate) ion(-4)	NPIVHPO44ION
Np(HPO4)5-6	Neptunium(IV) penta(hydrogen orthophosphate) ion(-6)	NPIVHPO45ION
Np(NO3)2+2	Neptunium(IV) dinitrate ion(+2)	NPIVNO32ION
Np(NO3)3+1	Neptunium(IV) trinitrate ion(+1)	NPIVNO33ION
Np(NO3)4	Neptunium(IV) nitrate	NPIVNO34
Np(OH)+3	Neptunium(IV) monohydroxide ion(+3)	NPIVOHION
Np(OH)2+2	Neptunium(IV) dihydroxide ion(+2)	NPIVOH2ION
Np(OH)3	Neptunium(III) hydroxide	NPIIIOH3
Np(OH)3+1	Neptunium(IV) trihydroxide ion(+1)	NPIVOH3ION
Np(OH)4	Neptunium(IV) hydroxide	NPIVOH4
Np(OH)5-1	Neptunium(IV) pentahydroxide ion(-1)	NPIVOH5ION
Np(SO4)2	Neptunium(IV) sulfate	NPIVSO42

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Np+3	Neptunium ion(+3)	NPIIIION
Np+4	Neptunium ion(+4)	NPIVION
NpBr3	Neptunium(III) bromide	NPIIIBR3
NpBr4	Neptunium(IV) bromide	NPIVBR4
NpCl+3	Neptunium(IV) monochloride ion(+3)	NPIVCLION
NpCl2+2	Neptunium(IV) dichloride ion(+2)	NPIVCL2ION
NpCl3	Neptunium(III) chloride	NPIIICL3
NpCl4	Neptunium(IV) chloride	NPIVCL4
NpF+3	Neptunium(IV) monofluoride ion(+3)	NPIVFION
NpF3	Neptunium(III) fluoride	NPIIIF3
NpF4	Neptunium(IV) fluoride	NPIVF4
NpF6	Neptunium(VI) fluoride	NPF6
NpH2PO4+2	Neptunium(III) dihydrogen orthophosphate ion(+2)	NPIIIH2PO4ION
NpNO3+3	Neptunium(IV) mononitrate ion(+3)	NPIVNO3ION
NpO2(C2O4)2-2	Dioxoneptunium(VI) dioxalate ion(-2)	NPO2C2O42ION
NpO2(C2O4)2-3	Dioxoneptunium(V) dioxalate ion(-3)	NPVO2C2O42ION
NpO2(CO3)2-2	Dioxoneptunium dicarbonate ion(-2)	NPO2CO32ION
NpO2(CO3)2-3	Dioxoneptunium(V) dicarbonate ion(-3)	NPVO2CO32ION
NpO2(CO3)3-4	Dioxoneptunium tricarbonate ion(-4)	NPO2CO33ION
NpO2(CO3)3-5	Dioxoneptunium(V) tricarbonate ion(-5)	NPVO2CO33ION
NpO2(OH)2	Dioxoneptunium(VI) hydroxide	NPO2OH2
NpO2(SO4)2-2	Dioxoneptunium(VI) disulfate ion(-2)	NPO2SO42ION
NpO2[C10H12N2O8]-3	Dioxoneptunium EDTA ion(-3)	NPO2EDTAION
NpO2[C6H6NO6]-2	Dioxoneptunium(VI) NTA ion(-2)	NPO2NTAION
NpO2[H2C6H6NO6]	Dioxoneptunium(VI) dihydrogen NTA	NPO2H2NTA
NpO2[H3C10H12N2O8]	Dioxoneptunium(VI) trihydrogen EDTA	NPO2H3EDTA
NpO2[HC10H12N2O8]-2	Dioxoneptunium(VI) hydrogen EDTA ion(-2)	NPO2HEDTAION
NpO2[HC6H6NO6]-1	Dioxoneptunium(VI) hydrogen NTA ion(-1)	NPO2HNTAION
NpO2+1	Dioxoneptunium(V) ion(+1)	NPVO2ION
NpO2+2	Dioxoneptunium(VI) ion(+2)	NPO2ION
NpO2C2O4	Dioxoneptunium(VI) oxalate	NPO2C2O4
NpO2C2O4-1	Dioxoneptunium(V) monooxalate ion(-1)	NPVO2C2O4ION
NpO2Cl	Dioxoneptunium(V) chloride	NPVO2CL
NpO2Cl+1	Dioxoneptunium(VI) monochloride ion(+1)	NPO2CLION
NpO2Cl2	Dioxoneptunium(VI) chloride	NPO2CL2
NpO2CO3	Dioxoneptunium(VI) carbonate	NPO2CO3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
NpO2CO3-1	Dioxoneptunium(V) monocarbonate ion(-1)	NPVO2CO3ION
NpO2F	Dioxoneptunium(V) fluoride	NPVO2F
NpO2F+1	Dioxoneptunium(VI) monofluoride ion(+1)	NPO2FION
NPO2F2	Dioxoneptunium(VI) fluoride	NPO2F2
NpO2H2PO4	Dioxoneptunium(V) dihydrogen orthophosphate	NPVO2H2PO4
NpO2H2PO4+1	Dioxoneptunium(VI) dihydrogen orthophosphate ion(+1)	NPO2H2PO4ION
NpO2HC2O4+1	Dioxoneptonium(VI) hydrogen oxalate ion(+1)	NPO2HC2O4ION
NpO2HPO4	Dioxoneptunium(VI) hydrogen orthophosphate	NPO2HPO4
NpO2HPO4+2	Neptunium(IV) mono(hydrogen orthophosphate) ion(+2)	NPIVHPO4ION
NpO2HPO4-1	Dioxoneptunium(V) hydrogen orthophosphate ion(-1)	NPVO2HPO4ION
NpO2NO3+1	Dioxoneptunium(VI) mononitrate ion(+1)	NPO2NO3ION
NpO2OH	Dioxoneptunium(V) hydroxide	NPVO2OH
NpO2OH+1	Dioxoneptunium(VI) monohydroxide(+1)	NPO2OHION
NpO2SO4	Dioxoneptunium(VI) sulfate	NPO2SO4
NpO2SO4-1	Dioxoneptunium(V) sulfate ion(-1)	NPVO2SO4ION
NpOH+2	Neptunium(III) monohydroxide ion(+2)	NPIIIOHION
NpSO4+2	Neptunium(IV) sulfate ion(+2)	NPIVSO4ION
O2	Oxygen	O2
O3	Ozone	OZONE
O3Te-2	Tellurate(IV) ion(-2)	TEIVO3ION
OH-1	Hydroxide ion(-1)	OHION
Os	Osmium	OSEL
P	Phosphorus	PEL
P2O5	Phosphorus pentoxide	P2O5
P2O7-4	Pyrophosphate ion(-4)	P2O7ION
Pb	Lead	PBEL
Pb(HCO3)2	Lead(II) bicarbonate	PBHCO32
PB(HS)2	Lead(II) bisulfide	PBHS2
PB(HSO3)2	Lead(II) bisulfite	PBHSO32
Pb(HSO4)2	Lead bisulfate	PBHSO42
Pb(NH2CO2)2	Lead(II) carbamate	PBNH2CO22
Pb(NO2)2	Lead(II) nitrite	PBNO22
Pb(NO2)3-1	Lead(II) trinitrite ion(-1)	PBNO23ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Pb(NO3)2	Lead(II) nitrate	PBNO32
Pb(NO3)3-1	Lead(II) trinitrate ion(-1)	PBNO33ION
Pb(OH)2	Lead(II) hydroxide	PBOH2
Pb(SCN)2	Lead(II) thiocyanate	PBSCN2
Pb(VO3)2	Lead(II) metavanadate	PBVO32
Pb[C10H12N2O8]-2	Lead(II) EDTA ion(-2)	PBEDTAION
Pb[C14H18N3O10]-3	Lead(II) DTPA ion(-3)	PBDTPAION
Pb[C2H3O2]+1	Lead(II) monoacetate ion(+1)	PBACETION
Pb[C2H3O2]2	Lead(II) acetate	PBACET2
Pb[C2H3O2]3-1	Lead(II) triacetate ion(-1)	PBACET3ION
Pb[C2H3O3]+1	Lead(II) monoglycolate ion(+1)	PBGLYCOLION
Pb[C2H3O3]2	Lead(II) diglycolate	PBGLYCOL2
Pb[C2H4NO2]+1	Lead(II) monoglycine ion(+1)	PBGLYCINION
Pb[C2H4NO2]2	Lead(II) diglycine	PBGLYCIN2
Pb[C2H7NO]+2	Lead(II) mono(2-aminoethanol) ion(+2)	PBMEXHION
Pb[C2H8N2]+2	Lead(II) monoethylenediamine ion(+2)	PBEDAION
Pb[C2H8N2]2+2	Lead(II) di(ethylenediamine) ion(+2)	PBEDA2ION
Pb[C3H6NO2]+1	Lead monoalanine ion(+1)	PBALANION
Pb[C3H6NO2]2	Lead(II) alanine	PBALAN2
Pb[C4H4O6]	Lead(II) tartrate	PBTARTRT
Pb[C6H6NO6]-1	Lead(II) NTA ion(-1)	PBNTAION
Pb[H2C10H12N2O8]	Lead(II) dihydrogen EDTA	PBH2EDTA
Pb[H3C14H18N3O10]	Lead(II) trihydrogen DTPA	PBH3DTPA
Pb[HC12N2O8]-1	Lead(II) hydrogen EDTA ion(-1)	PBHEDTAION
Pb[HC14H18N3O10]-2	Lead(II) hydrogen DTPA ion(-2)	PBHDTPAION
Pb[HC6H6NO6]	Lead(III) hydrogen NTA	PBHNTA
Pb[HCOO]+1	Lead(II) monoformate ion(+1)	PBCOOHION
Pb[HCOO]2	Lead(II) formate	PBCOOH2
Pb+2	Lead(II) ion(+2)	PBION
Pb2[C14H18N3O10]-1	Dilead(II) DTPA ion(-1)	PB2DTPAION
Pb3(PO4)2	Lead(II) orthophosphate	PB3PO42
Pb3(VO4)2	Lead(II) orthovanadate	PB3VO42
PbBr+1	Lead(II) monobromide ion(+1)	PBBRION
PbBr2	Lead(II) bromide	PBBR2
PbBr3-1	Lead(II) tribromide ion(-1)	PBBR3ION
PbC2O4	Lead(II) oxalate	PBC2O4
PbCl+1	Lead(II) monochloride ion(+1)	PBCLION
PbCl2	Lead(II) chloride	PBCL2
PbCl3-1	Lead(II) trichloride ion(-1)	PBCL3ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
PbCl4-2	Lead(II) tetrachloride ion(-2)	PBCL4ION
PbCO3	Lead(II) carbonate	PBCO3
PbF+1	Lead(II) monofluoride ion(+1)	PBFION
PbF2	Lead(II) fluoride	PBF2
PbF3-1	Lead(II) trifluoride ion(-1)	PBF3ION
PbF4-2	Lead(II) tetrafluoride ion(-2)	PBF4ION
PbH2PO4+1	Lead(II) dihydrogen orthophosphate ion(+1)	PBH2PO4ION
PbHPO4	Lead(II) hydrogen orthophosphate	PBHPO4
PbI+1	Lead(II) monoiodide ion(+1)	PBIION
PbI2	Lead(II) iodide	PBI2
PbI3-1	Lead(II) triiodide ion(-1)	PBI3ION
PbI4-2	Lead(II) tetraiodide ion(-2)	PBI4ION
PbMoO4	Lead(II) molybdate	PBMOO4
PbNO2+1	Lead(II) mononitrite ion(+1)	PBNO2ION
PbNO3+1	Lead(II) mononitrate ion(+1)	PBNO3ION
PbO	Lead(II) oxide	PBO
PbOH+1	Lead(II) monohydroxide ion(+1)	PBOHION
PbS	Lead(II) sulfide	PBS
PbSCN+1	Lead(II) thiocyanate ion(+1)	PBSCNION
PbSe	Lead(II) selenide	PBSE
PbSO3	Lead(II) sulfite	PBSO3
PbSO4	Lead(II) sulfate	PBSO4
PbWO4	Lead(II) tungstate(VI)	PBWO4
Pd	Palladium	PDEL
Pd(NH3)+2	Palladium(II) monoammonia ion(+2)	PDNH3ION
Pd(NH3)2+2	Palladium(II) diammonia ion(+2)	PDNH32ION
Pd(NH3)3+2	Palladium(II) triammonia ion(+2)	PDNH33ION
Pd(NH3)4+2	Palladium(II) tetraammonia ion(+2)	PDNH34ION
Pd(OH)2	Palladium(II) hydroxide	PDIIOH2
Pd(SO4)2-2	Palladium(II) disulfate ion(-2)	PDIISO42ION
Pd(SO4)3-4	Palladium(II) trisulfate ion(-4)	PDIISO43ION
Pd[C2H3O2]+1	Palladium(II) monoacetate ion(+1)	PDACETION
Pd[C2H3O2]2	Palladium(II) acetate	PDACET2
Pd[C2H3O2]3-1	Palladium(II) triacetate ion(-1)	PDACET3ION
Pd[C2H4NO2]+1	Palladium(II) monoglycine ion(+1)	PDGLYCINION
Pd[C2H4NO2]2	Palladium(II) diglycine	PDGLYCIN2
Pd+2	Palladium ion(+2)	PDIIION
PdCl+1	Palladium(II) monochloride ion(+1)	PDIICLION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
PdCl2	Palladium(II) chloride	PDIICL2
PdCl3-1	Palladium(II) trichloride ion(-1)	PDIICL3ION
PdCl4-2	Palladium(II) tetrachloride ion(-2)	PDIICL4ION
PdOH+1	Palladium(II) monohydroxide ion(+1)	PDIIOHION
PdS	Palladium(II) sulfide	PDS
PdSO4	Palladium(II) sulfate	PDIISO4
Pm	Promethium	PMEL
PO4-3	Phosphate ion(-3)	PO4ION
Pr	Praseodymium	PREL
Pr(NO3)3	Praseodymium(III) nitrate	PRNO33
Pr(NO3)3.6H2O	Praseodymium(III) nitrate hexahydrate	PRNO33.6H2O
Pr(OH)[C6H6NO6]-1	Praseodymium(III) hydroxide NTA ion(-1)	PROHNTAION
Pr(OH)2+1	Praseodymium(III) dihydroxide ion(+1)	PROH2ION
Pr(OH)3	Praseodymium(III) hydroxide	PROH3
Pr(OH)4-1	Praseodymium(III) tetrahydroxide ion(-1)	PROH4ION
Pr(SO4)2-1	Praseodymium(III) disulfate ion(-1)	PRSO42ION
Pr[C10H12N2O8]-1	Praseodymium(III) EDTA ion(-1)	PREDTAION
Pr[C14H18N3O10]-2	Praseodymium(III) DTPA ion(-2)	PRDTPAION
Pr[C2H3O2]+2	Praseodymium(III) monoacetate ion(+2)	PRACETION
Pr[C2H3O2]2+1	Praseodymium(III) diacetate ion(+1)	PRACET2ION
Pr[C2H3O2]3	Praseodymium(III) acetate	PRACET3
Pr[C4H4O6]+1	Praseodymium(III) tartrate ion(+1)	PRTRTRTION
Pr[C6H5O7]	Praseodymium(III) citrate	PRCTRT
Pr[C6H6NO6]	Praseodymium(III) NTA	PRNTA
Pr[C6H6NO6]2-3	Praseodymium(III) di-NTA ion(-3)	PRNTA2ION
Pr[H2C14H18N3O10]	Praseodymium(III) dihydrogen DTPA	PRH2DTPA
Pr[HC10H12N2O8]	Praseodymium(III) hydrogen EDTA	PRHEDTA
Pr[HC14H18N3O10]-1	Praseodymium(III) hydrogen DTPA ion(-1)	PRHDTPAION
Pr+3	Praseodymium ion(+3)	PRION
Pr2(CO3)3	Praseodymium(III) carbonate	PR2CO33
Pr2(SO4)3	Praseodymium(III) sulfate	PR2SO43
Pr2(WO4)3	Praseodymium(III) tungstate	PR2WO43
Pr2[C4H4O6]3	Praseodymium(III) tartrate	PR2TRTRT3
PrBr3	Praseodymium(III) bromide	PRBR3
PrCl+2	Praseodymium(III) monochloride ion(+2)	PRCLION
PrCl2+1	Praseodymium(III) dichloride ion(+1)	PRCL2ION
PrCl3	Praseodymium(III) chloride	PRCL3
PrCl3.7H2O	Praseodymium(III) chloride heptahydrate	PRCL3.7H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
PrCl4-1	Praseodymium(III) tetrachloride ion(-1)	PRCL4ION
PrCO3+1	Praseodymium(III) carbonate ion(+1)	PRCO3ION
PrF+2	Praseodymium(III) monofluoride ion(+2)	PRFION
PrF2+1	Praseodymium(III) difluoride ion(+1)	PRF2ION
PrF3	Praseodymium(III) fluoride	PRF3
PrF4-1	Praseodymium(III) tetrafluoride ion(-1)	PRF4ION
PrH2PO4+2	Praseodymium(III) dihydrogen orthophosphate ion(+2)	PRH2PO4ION
PrHCO3+2	Praseodymium(III) bicarbonate ion(+2)	PRHCO3ION
PrI3	Praseodymium(III) iodide	PRI3
PrNO3+2	Praseodymium(III) mononitrate ion(+2)	PRNO3ION
PrOH+2	Praseodymium(III) monohydroxide ion(+2)	PROHION
PrPO4	Praseodymium(III) orthophosphate	PRPO4
PrSO4+1	Praseodymium(III) sulfate ion(+1)	PRSO4ION
Pt	Platinum	PTEL
Pt(NH3)4+2	Platinum(II) tetraammonia ion(+2)	PTIINH34ION
Pt(OH)2	Platinum(II) hydroxide	PTIIOH2
Pt(SO4)2-2	Platinum(II) disulfate ion(-2)	PTIISO42ION
Pt(SO4)3-4	Platinum(II) trisulfate ion(-4)	PTIISO43ION
Pt[(NH3)6]+4	Platinum(IV) hexaammonia ion(+4)	PTIVNH36ION
Pt[C2H3O2]+1	Platinum(II) monoacetate ion(+1)	PTACETION
Pt[C2H3O2]2	Platinum(II) acetate	PTACET2
Pt[C2H3O2]3-1	Platinum(II) triacetate ion(-1)	PTACET3ION
Pt[C2H4NO2]+1	Platinum(II) monoglycine ion(+1)	PTGLYCINION
Pt[C2H4NO2]2	Platinum(II) diglycine	PTGLYCIN2
Pt[H2C10H12N2O8]	Platinum(II) dihydrogen EDTA	PTH2EDTA
Pt[H3C10H12N2O8]+1	Platinum(II) trihydrogen EDTA ion(+1)	PTH3EDTAION
Pt[HC10H12N2O8]-1	Platinum(II) hydrogen EDTA ion(-1)	PTHEDTAION
Pt+2	Platinum ion(+2)	PTIIION
Pt+4	Platinum ion(+4)	PTIVION
PtCl+1	Platinum(II) monochloride ion(+1)	PTIICLION
PtCl+3	Platinum(IV) monochloride ion(+3)	PTIVCLION
PtCl2	Platinum(II) chloride	PTIICL2
PtCl2+2	Platinum(IV) dichloride ion(+2)	PTIVCL2ION
PtCl3+1	Platinum(IV) trichloride ion(+1)	PTIVCL3ION
PtCl3-1	Platinum(II) trichloride ion(-1)	PTIICL3ION
PtCl4	Platinum(IV) chloride	PTIVCL4
PtCl4-2	Platinum(II) tetrachloride ion(-2)	PTIICL4ION
PtCl5-1	Platinum(IV) pentachloride ion(-1)	PTIVCL5ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
PtCl6-2	Platinum(IV) hexachloride ion(-2)	PTIVCL6ION
PtOH+1	Platinum(II) monohydroxide ion(+1)	PTIIOHION
PtS	Platinum(II) sulfide	PTS
PtSO4	Platinum(II) sulfate	PTIISO4
Pu	Plutonium	PUEL
Pu(C2O4)2	Plutonium(IV) oxalate	PUIVC2O42
Pu(C2O4)3-2	Plutonium(IV) trioxalate ion(-2)	PUIVC2O43ION
Pu(C2O4)4-4	Plutonium(VI) tetraoxalate ion(-4)	PUIVC2O44ION
Pu(CO3)2	Plutonium(IV) carbonate	PUIVCO32
Pu(HPO4)2	Plutonium(IV) hydrogen orthophosphate	PUIVHPO42
Pu(NO3)2+2	Plutonium(IV) dinitrate ion(+2)	PUIVNO32ION
Pu(NO3)3+1	Plutonium(IV) trinitrate ion(+1)	PUIVNO33ION
Pu(NO3)4	Plutonium(IV) nitrate	PUIVNO34
Pu(OH)2+2	Plutonium(IV) dihydroxide ion(+2)	PUIVOH2ION
Pu(OH)3	Plutonium(III) hydroxide	PUIIIOH3
Pu(OH)3+1	Plutonium(IV) trihydroxide ion(+1)	PUIVOH3ION
Pu(OH)4	Plutonium(IV) hydroxide	PUIVOH4
Pu(SO4)2	Plutonium(IV) sulfate	PUIVSO42
Pu[C10H12N2O8]	Plutonium(IV) EDTA	PUIVEDTA
Pu[C6H5O7]+1	Plutonium(IV) citrate ion(+1)	PUIVCITRATION
Pu+3	Plutonium ion(+3)	PUIIIION
Pu+4	Plutonium ion(+4)	PUIVION
Pu2(SO4)3	Plutonium(III) sulfate	PUIII2SO43
Pu2O3	Plutonium(III) oxide	PU2O3
PuC2O4+2	Plutonium(IV) monooxalate ion(+2)	PUIVC2O4ION
PuCl+3	Plutonium(IV) monochloride ion(+3)	PUIVCLION
PuCl2+2	Plutonium(IV) dichloride ion(+2)	PUIVCL2ION
PuCl3	Plutonium(III) chloride	PUIIICL3
PuCl3.6H2O	Plutonium(III) chloride hexahydrate	PUIIICL3.6H2O
PuCl3+1	Plutonium(IV) trichloride ion(+1)	PUIVCL3ION
PuCl4	Plutonium(IV) chloride	PUIVCL4
PuCO3+2	Plutonium(IV) carbonate ion(+2)	PUIVCO3ION
PuCO3-1	Dioxyplutonium(V) carbonate ion(-1)	PUVO2CO3ION
PuF2+2	Plutonium(IV) difluoride ion(+2)	PUIVF2ION
PuF3	Plutonium(III) fluoride	PUIIIF3
PuF3+1	Plutonium(IV) trifluoride ion(+1)	PUIVF3ION
PuF3+3	Plutonium(IV) monofluoride ion(+3)	PUIVFION
PuF4	Plutonium(IV) fluoride	PUIVF4
PuF6	Plutonium(VI) fluoride	PUF6

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
PuHPO4	Dioxyplutonium(VI) hydrogen orthophosphate	PUO2HPO4
PuI3	Plutonium(III) iodide	PUIIII3
PuNO3+3	Plutonium(IV) mononitrate ion(+3)	PUIVNO3ION
PuO2(C2O4)2-2	Dioxyplutonium(VI) dioxalate ion(-2)	PUO2C2O42ION
PuO2(C2O4)2-3	Dioxyplutonium(V) dioxalate ion(-3)	PUVO2C2O42ION
PuO2(CO3)2-2	Dioxyplutonium(VI) dicarbonate ion(-2)	PUO2CO32ION
PuO2(CO3)3-4	Dioxyplutonium(VI) tricarbonate ion(-4)	PUO2CO33ION
PuO2(NO3)2	Dioxyplutonium(VI) nitrate	PUO2NO32
PuO2(OH)+1	Dioxyplutonium(VI) monohydroxide ion(+1)	PUO2OHION
PuO2(OH)2	Dioxyplutonium(VI) hydroxide	PUO2OH2
PuO2(SO4)2-2	Dioxyplutonium(VI) disulfate ion(-2)	PUO2SO42ION
PuO2[C10H12N2O8]-2	Dioxyplutonium(VI) EDTA ion(-2)	PUO2EDTAION
PuO2[C10H13N2O8]-2	Dioxyplutonium(V) hydrogen EDTA ion(-2)	PUVO2HEDTAION
PuO2[C2H3O3]+1	Dioxyplutonium(VI) monoglycolate ion(+1)	PUO2GLYCOLION
PuO2[C2H3O3]2	Dioxyplutonium(VI) glycolate	PUO2GLYCOL2
PuO2[C2H3O3]3-1	Dioxyplutonium(VI) triglycolate ion(-1)	PUO2GLYCOL3ION
PuO2[C6H6NO6]-2	Dioxyplutonium(VI) NTA ion(-2)	PUO2NTAION
PuO2[H2C6H6NO6]	Dioxyplutonium(VI) dihydrogen NTA	PUO2H2NTA
PuO2[H3C10H12N2O8]	Dioxyplutonium(VI) trihydrogen EDTA	PUO2H3EDTA
PuO2[HC10H12N2O8]-2	Dioxyplutonium(VI) hydrogen EDTA ion(-2)	PUO2HEDTAION
PuO2+1	Dioxyplutonium(V) ion(+1)	PUVO2ION
PuO2+2	Dioxyplutonium(VI) ion(+2)	PUO2ION
PuO2C2O4	Dioxyplutonium(VI) oxalate	PUO2C2O4
PuO2C2O4-1	Dioxyplutonium(V) monooxalate ion(-1)	PUVO2C2O4ION
PuO2Cl	Dioxyplutonium(V) chloride	PUVO2CL
PuO2Cl+1	Dioxyplutonium(VI) monochloride ion(+1)	PUO2CLION
PuO2Cl2	Dioxyplutonium(VI) chloride	PUO2CL2
PuO2CO3	Dioxyplutonium(VI) carbonate	PUO2CO3
PuO2F	Dioxyplutonium(V) fluoride	PUVO2F
PuO2F+1	Dioxyplutonium(VI) monofluoride ion(+1)	PUO2FION
PuO2F2	Dioxyplutonium(VI) fluoride	PUO2F2
PuO2F3-1	Dioxyplutonium(VI) trifluoride ion(-1)	PUO2F3ION
PuO2F4-2	Dioxyplutonium(VI) tetrafluoride ion(-2)	PUO2F4ION
PuO2NO3	Dioxyplutonium(V) nitrate	PUVO2NO3
PuO2NO3+1	Dioxyplutonium(VI) mononitrate ion(+1)	PUO2NO3ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
PuO2OH	Dioxyplutonium(V) hydroxide	PUVO2OH
PuO2SO4-1	Dioxyplutonium(V) sulfate ion(-1)	PUVO2SO4ION
PuOH+3	Plutonium(IV) monohydroxide ion(+3)	PUIVOHION
PuPO4	Lutetium(III) orthophosphate	LUPO4
PuSO4	Dioxyplutonium(VI) sulfate	PUO2SO4
PuSO4+1	Plutonium(III) sulfate ion(+1)	PUIIISO4ION
PuSO4+2	Plutonium(IV) monosulfate ion(+2)	PUIVSO4ION
Ra	Radium	RAEL
Ra(IO3)2	Radium iodate	RAIO32
Ra(IO3)2.H2O	Radium iodate monohydrate	RAIO32.1H2O
Ra(NO3)2	Radium nitrate	RANO32
Ra(OH)2	Radium hydroxide	RAOH2
Ra[C10H12N2O8]-2	Radium EDTA ion(-2)	RAEDTAION
Ra[C10H14N2O8]	Radium dihydrogen EDTA	RAH2EDTA
Ra[C2H3O2]+1	Radium monoacetate ion(+1)	RAACETION
Ra[C2H3O2]2	Radium acetate	RAACET2
Ra[C2H3O3]+1	Radium monoglycolate ion(+1)	RAGLYCOLION
Ra[C2H3O3]2	Radium glycolate	RAGLYCOL2
Ra[C2H4NO2]+1	Radium monoglycine ion(+1)	RAGLYCINION
Ra[C2H4NO2]2	Radium diglycine	RAGLYCIN2
Ra[C4H4O6]	Radium tartrate	RATARTRT
Ra+2	Radium ion(+2)	RAION
Ra3(PO4)2	Radium phosphate	RA3PO42
RaBr2	Radium bromide	RABR2
RaBr2.2H2O	Radium bromide dihydrate	RABR2.2H2O
RaCl+1	Radium monochloride ion(+1)	RACLION
RaCl2	Radium chloride	RACL2
RaCl2.2H2O	Radium chloride dihydrate	RACL2.2H2O
RaCO3	Radium carbonate	RACO3
RaF+1	Radium monofluoride ion(+1)	RAFION
RaF2	Radium fluoride	RAF2
RaI+1	Radium monoiodide ion(+1)	RAIION
RaI2	Radium iodide	RAI2
RaI2.0.5H2O	Radium iodide hemihydrate	RAI2.0.5H2O
RaNO3+1	Radium mononitrate ion(+1)	RANO3ION
RaOH+1	Radium monohydroxide ion(+1)	RAOHION
RaS	Radium sulfide	RAS
RaSe	Radium selenide	RASE
RaSeO3	Radium selenite	RASEO3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
RaSeO4	Radium selenate	RASEO4
RaSO3	Radium sulfite	RASO3
RaSO4	Radium sulfate	RASO4
Rb	Rubidium	RBEL
Rb[B(C6H5)4]	Rubidium tetraphenylborate	RBBPH4
Rb[C2H3O2]	Rubidium acetate	RBACET
Rb[C2H3O3]	Rubidium glycolate	RBGLYCOL
Rb[C2H3O3]2-1	Rubidium diglycolate ion(-1)	RBGLYCOL2ION
Rb[C6H5O7]-2	Rubidium citrate ion(-2)	RBCTRTION
Rb[H2C6H5O7]	Rubidium dihydrogen citrate	RBH2CTRT
Rb+1	Rubidium ion(+1)	RBION
Rb2CO3	Rubidium carbonate	RB2CO3
Rb2CO3.1.5H2O	Rubidium carbonate 1.5 hydrate	RB2CO3.1.5H2O
Rb2CO3.1H2O	Rubidium carbonate monohydrate	RB2CO3.1H2O
Rb2CO3.3.5H2O	Rubidium carbonate 3.5 hydrate	RB2CO3.3.5H2O
Rb2CrO4	Rubidium chromate(VI)	RB2CRO4
Rb2MoO4	Rubidium molybdate(VI)	RB2MOO4
Rb2SeO3	Rubidium selenite	RB2SEO3
Rb2SeO4	Rubidium selenate	RB2SEO4
Rb2SO4	Rubidium sulfate	RB2SO4
Rb2WO4	Rubidium tungstate(VI)	RB2WO4
RbBO2	Rubidium metaborate	RBBO2
RbBr	Rubidium bromide	RBBR
RbCl	Rubidium chloride	RBCL
RbF	Rubidium fluoride	RBF
RbF.1H2O	Rubidium fluoride monohydrate	RBF.1H2O
RbH2PO4	Rubidium dihydrogen orthophosphate	RBH2PO4
RbHF2	Rubidium hydrogen difluoride	RBHF2
RbI	Rubidium iodide	RBI
RbNbO3	Rubidium niobate	RBNBO3
RbNO2	Rubidium nitrite	RBNO2
RbNO3	Rubidium nitrate	RBNO3
RbOH	Rubidium hydroxide	RBOH
RbOH.1H2O	Rubidium hydroxide monohydrate	RBOH.1H2O
RbOH.2H2O	Rubidium hydroxide dihydrate	RBOH.2H2O
RbSO4-1	Rubidium sulfate ion(-1)	RBSO4ION
RbTaO3	Rubidium tantalate	RBTAO3
Re	Rhenium	REEL
ReO4-1	Rhenate(VII) ion(-1)	REO4ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Rh(OH)2	Rhodium(II) hydroxide	RHIIOH2
Rh(OH)2+1	Rhodium(III) dihydroxide ion(+1)	RHIIIOH2ION
Rh(OH)3	Rhodium(III) hydroxide	RHIIIOH3
Rh(SO4)2-1	Rhodium(III) disulfate ion(-1)	RHIIISO42ION
Rh(SO4)2-2	Rhodium(II) disulfate ion(-2)	RHIISO42ION
Rh(SO4)3-3	Rhodium(III) trisulfate ion(-3)	RHIIISO43ION
Rh(SO4)3-4	Rhodium(II) trisulfate ion(-4)	RHIISO43ION
Rh[C2H3O2]+1	Rhodium(II) monoacetate ion(+1)	RHACETION
Rh[C2H3O2]2	Rhodium(II) acetate	RHACET2
Rh[C2H3O2]3-1	Rhodium(II) triacetate ion(-1)	RHACET3ION
Rh[C2H4NO2]+1	Rhodium(II) monoglycine ion(+1)	RHGLYCINION
Rh[C2H4NO2]2	Rhodium(II) glycine	RHGLYCIN2
Rh+2	Rhodium(III) ion(+2)	RHIIION
Rh+3	Rhodium ion(+3)	RHIIIION
Rh2(SO4)3	Rhodium(III) sulfate	RHIII2SO43
Rh2O3	Rhodium(III) oxide	RH2O3
RhCl+1	Rhodium(II) monochloride ion(+1)	RHIICLION
RhCl+2	Rhodium(III) monochloride ion(+2)	RHIIICLION
RhCl2	Rhodium(II) chloride	RHIICL2
RhCl2+1	Rhodium(III) dichloride ion(+1)	RHIIICL2ION
RhCl3	Rhodium(III) chloride	RHIIICL3
RhCl3-1	Rhodium(II) trichloride ion(-1)	RHIICL3ION
RhCl4-1	Rhodium(III) tetrachloride ion(-1)	RHIIICL4ION
RhCl4-2	Rhodium(II) tetrachloride ion(-2)	RHIICL4ION
RhOH+1	Rhodium(II) monohydroxide ion(+1)	RHIIOHION
RhOH+2	Rhodium(III) monohydroxide ion(+2)	RHIIIOHION
RhSO4	Rhodium(II) sulfate	RHIISO4
RhSO4+1	Rhodium(III) monosulfate ion(+1)	RHIIISO4ION
Rn	Radon	RN
Ru	Ruthenium	RUEL
Ru(OH)2	Ruthenium(II) hydroxide	RUIIOH2
Ru(OH)2+1	Ruthenium(III) dihydroxide ion(+1)	RUIIIOH2ION
Ru(OH)3	Ruthenium(III) hydroxide	RUIIIOH3
Ru(SO4)2-1	Ruthenium(III) disulfate ion(-1)	RUIIISO42ION
Ru(SO4)2-2	Ruthenium(II) disulfate ion(-2)	RUIISO42ION
Ru(SO4)3-3	Ruthenium(III) trisulfate ion(-3)	RUIIISO43ION
Ru(SO4)3-4	Ruthenium(II) trisulfate ion(-4)	RUIISO43ION
Ru[C2H3O2]+1	Ruthenium(II) monoacetate ion(+1)	RUACETION
Ru[C2H3O2]2	Ruthenium(II) acetate	RUACET2

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ru[C2H3O2]3-1	Ruthenium(II) triacetate ion(-1)	RUACET3ION
Ru[C2H4NO2]+1	Ruthenium(II) monoglycine ion(+1)	RUGLYCINION
Ru[C2H4NO2]2	Ruthenium(II) glycine	RUGLYCIN2
Ru+2	Ruthenium ion(+2)	RUIIION
Ru+3	Ruthenium ion(+3)	RUIIIION
Ru2(SO4)3	Ruthenium(III) sulfate	RUIII2SO43
RuCl+1	Ruthenium(II) monochloride ion(+1)	RUIICLION
RuCl+2	Ruthenium(III) monochloride ion(+2)	RUIIICLION
RuCl2	Ruthenium(II) chloride	RUIICL2
RuCl2+1	Ruthenium(III) dichloride ion(+1)	RUIIICL2ION
RuCl3	Ruthenium(III) chloride	RUIIICL3
RuCl3-1	Ruthenium(II) trichloride ion(-1)	RUIICL3ION
RuCl4-1	Ruthenium(III) tetrachloride ion(-1)	RUIIICL4ION
RuCl4-2	Ruthenium(II) tetrachloride ion(-2)	RUIICL4ION
RuCl5-2	Ruthenium(III) pentachloride ion(-2)	RUIIICL5ION
RuCl6-3	Ruthenium(III) hexachloride ion(-3)	RUIIICL6ION
RuOH+1	Ruthenium(II) monohydroxide ion(+1)	RUIIOHION
RuOH+2	Ruthenium(III) monohydroxide ion(+2)	RUIIIOHION
RuSO4	Ruthenium(II) sulfate	RUIISO4
RuSO4+1	Ruthenium(III) monosulfate ion(+1)	RUIIISO4ION
S-2	Sulfide ion(-2)	SION
S2-2	Disulfide ion(-2)	S2ION
S2O3-2	Thiosulfite(II) ion(-2)	S2O3ION
S2O4-2	Thiosulfate(III) ion(-2)	S2O4ION
S2O5-2	Orthosulfate(IV) ion(-2)	S2O5ION
S2O6-2	Metasulfate(V) ion(-2)	S2O6ION
S2O8-2	Parasulfate(VII) ion(-2)	S2O8ION
S3-2	Trisulfide ion(-2)	S3ION
S4-2	Tetrasulfide ion(-2)	S4ION
S5-2	Pentasulfide ion(-2)	S5ION
S5O6-2	Pentasulfate(II) ion(-2)	S5O6ION
S8	Sulfur	SULFUREL
Sb	Antimony	SBEL
Sb(OH)2+1	Antimony(III) dihydroxide ion(+1)	SBOH2ION
Sb(OH)3	Antimony(III) hydroxide	SBOH3
Sb(OH)4-1	Antimony(III) tetrahydroxide ion(-1)	SBOH4ION
Sb(OH)5	Antimony(V) hydroxide	SBOH5
Sb(OH)6-1	Antimony(V) hexahydroxide ion(-1)	SBOH6ION
Sb2(SO4)3	Antimony(III) sulfate	SB2SO43

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Sb2O3	Antimony(III) oxide	SB2O3
Sb2O5	Antimony(V) oxide	SB2O5
Sb2S3	Antimony(III) sulfide	SB2S3
Sb2Se3	Antimony(III) selenide	SB2SE3
SbBr3	Antimony(III) bromide	SBBR3
SbCl3	Antimony(III) chloride	SBCL3
SbF3	Antimony(III) fluoride	SBF3
SbI3	Antimony(III) iodide	SBI3
Sc	Scandium	SCEL
Sc(OH)3	Scandium hydroxide	SCOH3
Sc+3	Scandium ion(+3)	SCION
SCN-1	Thiocyanate ion(-1)	SCNION
Se	Selenium	SEEL
Se-2	Selenide ion(-2)	SEION
SeCN-1	Selenocianate ion(-1)	SECNION
SeO2	Selenium dioxide	SEO2
SeO3-2	Selenite ion(-2)	SEO3ION
SeO4-2	Selenate ion(-2)	SEO4ION
SF6	Sulfur hexafluoride	SF6
Si	Silicon	SIEL
SiCl4	Silicon tetrachloride	SICL4
SiF4	Tetrafluorosilane	SIF4
SiF6-2	Hexafluorosilicon ion(-2)	SIF6ION
SiO2	Silicon dioxide (amorphous)	SIO2
Sm	Samarium	SMEL
Sm(NO3)3	Samarium(III) nitrate	SMNO33
Sm(NO3)3.6H2O	Samarium(III) nitrate hexahydrate	SMNO33.6H2O
Sm(OH)[C6H6NO6]-1	Samarium(III) monohydroxide NTA ion(-1)	SMOHNTAION
Sm(OH)2	Samarium(II) hydroxide	SMIIOH2
Sm(OH)2+1	Samarium(III) dihydroxide ion(+1)	SMOH2ION
Sm(OH)3	Samarium(III) hydroxide	SMOH3
Sm(OH)4-1	Samarium(III) tetrahydroxide ion(-1)	SMOH4ION
Sm(SO4)2-1	Samarium(III) disulfate ion(-1)	SMSO42ION
Sm[C10H12N2O8]-1	Samarium(III) EDTA ion(-1)	SMEDTAION
Sm[C14H18N3O10]-2	Samarium(III) DTPA ion(-2)	SMDTPAION
Sm[C2H3O2]+2	Samarium(III) monoacetate ion(+2)	SMACETION
Sm[C2H3O2]2+1	Samarium(III) diacetate ion(+1)	SMACET2ION
Sm[C2H3O2]3	Samarium(III) acetate	SMACET3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Sm[C4H4O6]+1	Samarium(III) tartrate ion(+1)	SMTRTRTION
Sm[C6H5O7]	Samarium(III) citrate	SMCTRT
Sm[C6H6NO6]	Samarium(III) NTA	SMNTA
Sm[C6H6NO6]2-3	Samarium(III) di-NTA ion(-3)	SMNTA2ION
Sm[H2C14H18N3O10]	Samarium(III) dihydrogen DTPA	SMH2DTPA
Sm[HC10H12N2O8]	Samarium(III) hydrogen EDTA	SMHEDTA
Sm[HC14H18N3O10]-1	Samarium hydrogen DTPA ion(-1)	SMHDTPAION
Sm+2	Samarium ion(+2)	SMIIION
SM+3	Samarium ion(+3)	SMIIIION
Sm2(CO3)3	Samarium(III) carbonate	SM2CO33
Sm2(SeO4)3	Samarium(III) selenate	SMSEO43
Sm2(SeO4)3.8H2O	Samarium(III) selenate octahydrate	SMSEO43.8H2O
Sm2(SO4)3	Samarium(III) sulfate	SM2SO43
Sm2(SO4)3.8H2O	Samarium(III) sulfate octahydrate	SM2SO43.8H2O
Sm2(WO4)3	Samarium(III) tungstate	SM2WO43
Sm2[C4H4O6]3	Samarium(III) tartrate	SM2TRTRT3
SmCl+2	Samarium(III) monochloride ion(+2)	SMCLION
SmCl2+1	Samarium(III) dichloride ion(+1)	SMCL2ION
SmCl3	Samarium(III) chloride	SMCL3
SmCl3.6H2O	Samarium(III) chloride hexahydrate	SMCL3.6H2O
SmCl4-1	Samarium(III) tetrachloride ion(-1)	SMCL4ION
SmCO3+1	Samarium(III) carbonate ion(+1)	SMCO3ION
SmF+2	Samarium(III) monofluoride ion(+2)	SMFION
SmF2+1	Samarium difluoride ion(+1)	SMF2ION
SmF3	Samarium(III) fluoride	SMF3
SmF4-1	Samarium(III) tetrafluoride ion(-1)	SMF4ION
SmH2PO4+2	Samarium(III) dihydrogen orthophosphate ion(+2)	SMH2PO4ION
SmHCO3+2	Samarium(III) bicarbonate ion(+2)	SMHCO3ION
SmNO3+2	Samarium(III) mononitrate ion(+2)	SMNO3ION
SmOH+2	Samarium(III) monohydroxide ion(+2)	SMOHION
SmPO4	Samarium(III) orthophosphate	SMPO4
SmPO4.2H2O	Samarium(III) phosphate dihydrate	SMPO4.2H2O
SmSO4+1	Samarium(III) monosulfate ion(+1)	SMSO4ION
Sn	Tin	SNEL
Sn(CN)2	Tin(II) cyanide	SNCN2
Sn(OH)2	Tin(II) hydroxide	SNOH2
Sn(OH)2+2	Tin(IV) dihydroxide ion(+2)	SNIVOH2ION
Sn(OH)3+1	Tin(IV) trihydroxide ion(+1)	SNIVOH3ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Sn(OH)3-1	Tin(II) trihydroxide ion(-1)	SNOH3ION
Sn(OH)4	Tin(IV) hydroxide	SNIVOH4
Sn(OH)5-1	Tin(IV) pentahydroxide ion(-1)	SNIVOH5ION
Sn(OH)6-2	Tin(IV) hexahydroxide ion(-2)	SNIVOH6ION
Sn(SCN)2	Tin(II) thiocyanate	SNSCN2
Sn(SCN)3-1	Tin(II) trithiocyanate ion(-1)	SNSCN3ION
Sn[C4H4O6]	Tin(II) tartrate	SNTARTRT
Sn+2	Tin ion(+2)	SNION
Sn+4	Tin ion(+4)	SNIVION
SnBr+1	Tin(II) monobromide ion(+1)	SNBRION
SnBr2	Tin(II) bromide	SNBR2
SnBr3-1	Tin(II) tribromide ion(-1)	SNBR3ION
SnBr4	Tin(IV) bromide	SNIVBR4
SnCl+1	Tin(II) monochloride(+1)	SNCLION
SnCl+3	Tin(IV) monochloride ion(+3)	SNIVCLION
SnCl2	Tin(II) chloride	SNCL2
SnCl2+2	Tin(IV) dichloride ion(+2)	SNIVCL2ION
SnCl3+1	Tin(IV) trichloride ion(+1)	SNIVCL3ION
SnCl3-1	Tin(II) trichloride ion(-1)	SNCL3ION
SnCl4	Tin(IV) chloride	SNIVCL4
SnCl4-2	Tin(II) tetrachloride ion(-2)	SNCL4ION
SnCl5-1	Tin(IV) pentachloride ion(-1)	SNIVCL5ION
SnF+1	Tin(II) monofluoride ion(+1)	SNFION
SnF2	Tin(II) fluoride	SNF2
SnI2	Tin(II) iodide	SNI2
SnI4	Tin(IV) iodide	SNIVI4
SnMoO4	Tin(II) molybdate(VI)	SNMOO4
SnOH+1	Tin(II) monohydroxide ion(+1)	SNOHION
SnOH+3	Tin(IV) monohydroxide ion(+3)	SNIVOHION
SnSCN+1	Tin(II) monothiocyanate ion(+1)	SNSCNION
SnWO4	Tin(II) tungstate(VI)	SNWO4
SO2	Sulfur dioxide	SO2
SO3	Sulfur trioxide	SO3
SO3-2	Sulfite ion(-2)	SO3ION
SO4-2	Sulfate ion(-2)	SO4ION
Sr	Strontium	SREL
Sr(C2H3O2)2	Strontium acetate	SRAC2
Sr(CN)2	Strontium cyanide	SRCN2
Sr(CN)2.4H2O	Strontium cyanide tetrahydrate	SRCN2.4H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Sr(H2PO4)2	Strontiom dihydrogen orthophosphate	SRH2PO42
Sr(HC2O4)2	Strontium hydrogen oxalate	SRHC2O42
Sr(HCO3)2	Strontium bicarbonate	SRHCO32
Sr(HS)2	Strontium bisulfide	SRHS2
Sr(HSO3)2	Strontium bisulfite	SRHSO32
Sr(HSO4)2	Strontium bisulfate	SRHSO42
Sr(NH2CO2)2	Strontium carbamate	SRNH2CO22
Sr(NO2)2	Strontium nitrite	SRNO22
Sr(NO2)2.1H2O	Strontium nitrite monohydrate	SRNO22.1H2O
Sr(NO3)2	Strontium nitrate	SRNO32
Sr(NO3)2.4H2O	Strontium nitrate tetrahydrate	SRNO32.4H2O
Sr(OH)2	Strontium hydroxide	SROH2
Sr(OH)2.8H2O	Strontium hydroxide octahydrate	SROH2.8H2O
Sr(OH)2.H2O	Strontium hydroxide monohydrate	SROH2.1H2O
Sr[C10H12N2O8]-2	Strontium EDTA ion(-2)	SREDTAION
Sr[C10H14N2O8]	Strontium dihydrogen EDTA	SRH2EDTA
Sr[C14H18N3O10]-3	Strontium DTPA ion(-3)	SRDTPAION
Sr[C2H2O3]+1	Strontium monoglycolate ion(+1)	SRGLYCOLION
Sr[C2H3O2]+1	Strontium monoacetate ion(+1)	SRACETION
Sr[C2H3O2]2.0.5H2O	Strontium acetate hemihydrate	SRAC2.0.5H2O
Sr[C2H3O2]2.4H2O	Strontium acetate tetrahydrate	SRAC2.4H2O
Sr[C2H3O3]2	Strontium diglycolate	SRGLYCOL2
Sr[C2H4NO2]+1	Strontium monoglycine ion(+1)	SRGLYCINION
Sr[C2H4NO2]2	Strontium diglycine	SRGLYCIN2
Sr[C3H6NO2]+1	Strontium monoalanate ion(+1)	SRALANION
Sr[C3H6NO2]2	Strontium alanate	SRALAN2
Sr[C4H4O6]	Strontium tartrate	SRTRTRT
Sr[C6H5O7]-1	Strontium monocitrate ion(-1)	SRCTRTION
Sr[C6H6NO6]-1	Strontium NTA ion(-1)	SRNTAION
Sr[H3C14H18N3O10]	Strontium trihydrogen DTPA	SRH3DTPA
Sr[HC10H12N2O8]-1	Strontium hydrogen EDTA ion(-1)	SRHEDTAION
Sr[HC14H18N3O10]-2	Strontium hydrogen DTPA ion(-2)	SRHDTPAION
Sr[HC4H4O6]+1	Strontium hydrogen tartrate ion(+1)	SRHTARTRTION
Sr[HC6H5O7]	Strontium hydrogen citrate	SRHCTRT
Sr[HC6H6NO6]	Strontium hydrogen NTA	SRHNTA
Sr[HCOO]+1	Strontium monoformate ion(+1)	SRCOOHION
Sr[HCOO]2	Strontium formate	SRCOOH2
Sr+2	Strontium ion(+2)	SRION
Sr3(AsO4)2	Strontium arsenate	SR3ASO42

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Sr3(PO4)2	Strontium orthophosphate	SR3PO42
SrBr2	Strontium bromide	SRBR2
SrBr2.6H2O	Strontium bromide hexahydrate	SRBR2.6H2O
SrC2O4	Strontium oxalate	SRC2O4
SrC2O4.1H2O	Strontium oxalate monohydrate	SRC2O4.1H2O
SrCl2	Strontium chloride	SRCL2
SrCl2.1H2O	Strontium chloride monohydrate	SRCL2.1H2O
SrCl2.2H2O	Strontium chloride dihydrate	SRCL2.2H2O
SrCl2.6H2O	Strontium chloride hexahydrate	SRCL2.6H2O
SrCO3	Strontium carbonate	SRCO3
SrCrO4	Strontium chromate	SRCRO4
SrF+1	Strontium monofluoride(+1)	SRFION
SrF2	Strontium fluoride	SRF2
SrHC2O4+1	Strontium mono(hydrogen oxalate) ion(+1)	SRHC2O4ION
SrHPO4	Strontium hydrogen orthophosphate	SRHPO4
SrI2	Strontium iodide	SRI2
SrI2.2H2O	Strontium iodide dihydrate	SRI2.2H2O
SrI2.6H2O	Strontium iodide hexahydrate	SRI2.6H2O
SrMoO4	Strontium molybdate(VI)	SRMOO4
SrNO3+1	Strontium mononitrate ion(+1)	SRNO3ION
SrOH+1	Strontium monohydroxide ion(+1)	SROHION
SrPO4-1	Strontium orthophosphate ion(-1)	SRPO4ION
SrS	Strontium sulfide	SRS
SrSeO4	Strontium selenate	SRSEO4
SrSO3	Strontium sulfite	SRSO3
SrSO4	Strontium sulfate	SRSO4
SrWO4	Strontium tungstate(VI)	SRWO4
Ta	Tantalum	TAEL
Ta2O5	Tantalum(V) oxide	TA2O5
TaBr5	Tantalum(V) bromide	TABR5
TaCl5	Tantalum(V) chloride	TACL5
TaF5	Tantalum(V) fluoride	TAF5
TaO3-1	Tantalate ion(-1)	TAO3ION
Tb	Terbium	TBEL
Tb(NO3)3	Terbium(III) nitrate	TBNO33
Tb(OH)[C6H6NO6]-1	Terbium(III) hydroxide NTA ion(-1)	TBOHNTAION
Tb(OH)2+1	Terbium(III) dihydroxide ion(+1)	TBOH2ION
Tb(OH)3	Terbium(III) hydroxide	TBOH3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Tb(OH)4-1	Terbium(III) tetrahydroxide ion(-1)	TBOH4ION
Tb(SO4)2-1	Terbium(III) disulfate ion(-1)	TBSO42ION
Tb[C10H12N2O8]-1	Terbium(III) EDTA ion(-1)	TBEDTAION
Tb[C14H18N3O10]-2	Terbium(III) DTPA ion(-2)	TBDTPAION
Tb[C2H3O2]+2	Terbium(III) monoacetate ion(+2)	TBACETION
Tb[C2H3O2]2+1	Terbium(III) diacetate ion(+1)	TBACET2ION
Tb[C2H3O2]3	Terbium(III) acetate	TBACET3
Tb[C2O4]+1	Terbium(III) monooxalate ion(+1)	TBC2O4ION
Tb[C2O4]2-1	Terbium(III) dioxalate ion(-1)	TBC2O42ION
Tb[C4H4O6]+1	Terbium(III) monotartrate ion(+1)	TBTRTRTION
Tb[C6H5O7]	Terbium(III) citrate	TBCTRT
Tb[C6H6NO6]	Terbium(III) NTA	TBNTA
Tb[C6H6NO6]2-3	Terbium di-NTA ion(-3)	TBNTA2ION
Tb[H2C14H18N3O10]	Terbium(III) dihydrogen DTPA	TBH2DTPA
Tb[HC10H12N2O8]	Terbium(III) hydrogen EDTA	TBHEDTA
Tb+2	Terbium(III) monofluoride ion(+2)	TBFION
Tb+3	Terbium ion(+3)	TBION
Tb2(CO3)3	Terbium(III) carbonate	TB2CO33
Tb2(SO4)3	Terbium(III) sulfate	TB2SO43
Tb2(SO4)3.8H2O	Terbium(III) sulfate octahydrate	TB2SO43.8H2O
Tb2[C2O4]3	Terbium(III) oxalate	TB2C2O43
Tb2[C4H4O6]3	Terbium(III) tartrate	TB2TRTRT3
Tb2O3	Terbium(III) oxide	TB2O3
TbCl+2	Terbium(III) monochloride ion(+2)	TBCLION
TbCl2+1	Terbium(III) dichloride ion(+1)	TBCL2ION
TbCl3	Terbium(III) chloride	TBCL3
TbCl3.6H2O	Terbium(III) chloride hexahydrate	TBCL3.6H2O
TbCl4-1	Terbium(III) tetrachloride ion(-1)	TBCL4ION
TbCO3+1	Terbium(III) carbonate ion(+1)	TBCO3ION
TbF2+1	Terbium difluoride ion(+1)	TBF2ION
TbF3	Terbium(III) fluoride	TBF3
TbF4-1	Terbium(III) tetrafluoride ion(-1)	TBF4ION
TbH2PO4+2	Terbium dihydrogen orthophosphate ion(+2)	TBH2PO4ION
TbHC14H18N3O10-1	Terbium(III) hydrogen DTPA ion(-1)	TBHDTPAION
TbHCO3+2	Terbium(III) bicarbonate ion(+2)	TBHCO3ION
TbI+2	Terbium(III) monoiodide ion(+2)	TBIION
TbI3	Terbium(III) iodide	TBI3
TbNO3+2	Terbium(III) mononitrate ion(+2)	TBNO3ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
TbOH+2	Terbium(III) monohydroxide ion(+2)	TBOHION
TbPO4	Terbium(III) orthophosphate	TBPO4
TbSO4+1	Terbium(III) monosulfate ion(+1)	TBSO4ION
Tc	Technetium	TCEL
Tc(OH)2CO3	Technetium(IV) dihydroxide carbonate	TCIVOH2CO3
Tc(OH)3CO3-1	Technetium(IV) trihydroxide carbonate ion(-1)	TCIVOH3CO3ION
Tc2O7	Technetium heptoxide	TCVII2O7
TcO(OH)+1	Oxytechnetium(IV) monohydroxide ion(+1)	TCIVOOHION
TcO(OH)2	Oxytechnetium(IV) dihydroxide	TCIVOOH2
TcO(OH)3-1	Oxytechnetium(IV) trihydroxide ion(-1)	TCIVOOH3ION
TcO+2	Oxytechmetium(IV) ion(+2)	TCIVOION
TcO2	Technetium(IV) dioxide	TCIVO2
TcO2.2H2O	Technetium(IV) dioxide dihydrate	TCIVO2.2H2O
TcO4-1	Pertechnetate(VII) ion	TCVIIO4ION
Te	Tellurium	TEEL
Te(OH)3+1	Tellurium(IV) trihydroxide ion(+1)	TEIVOH3ION
Te-2	Telluride ion(-2)	TEION
TeO2	Tellurium(IV) oxide	TEO2
Th	Thorium	THEL
Th(C2O4)2	Thorium(IV) oxalate	THC2O42
Th(C2O4)3-2	Thorium(IV) trioxalate ion(-2)	THC2O43ION
Th(C2O4)4-4	Thorium(IV) tetraoxalate ion(-4)	THC2O44ION
Th(H2PO4)2+2	Thorium(IV) di(dihydrogen orthophosphate) ion(+2)	THH2PO42ION
Th(HPO4)2	Thorium(IV) hydrogen orthophosphate	THHPO42
Th(HPO4)3-2	Thorium(IV) tri(hydrogen orthophosphate) ion(-2)	THHPO43ION
Th(NO3)2+2	Thorium(IV) dinitrate ion(+2)	THNO32ION
Th(NO3)3+1	Thorium(IV) trinitrate ion(+1)	THNO33ION
Th(NO3)4	Thorium(IV) nitrate	THNO34
Th(NO3)4.4H2O	Thorium(IV) nitrate tetrahydrate	THNO34.4H2O
Th(NO3)4.5H2O	Thorium(IV) nitrate pentahydrate	THNO34.5H2O
Th(NO3)4.6H2O	Thorium(IV) nitrate hexahydrate	THNO34.6H2O
Th(OH)2+2	Thorium(IV) dihydroxide ion(+2)	THOH2ION
Th(OH)3+1	Thorium(IV) trihydroxide ion(+1)	THOH3ION
Th(OH)4	Thorium(IV) hydroxide	THOH4
Th(SO4)2	Thorium(IV) sulfate	THSO42
Th(SO4)3-2	Thorium(IV) trisulfate ion(-2)	THSO43ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Th(SO4)4-4	Thorium(IV) tetrasulfate ion(-4)	THSO44ION
Th[C10H12N2O8]	Thorium(IV) EDTA	THEDTA
Th[C14H18N3O10]-1	Thorium(IV) DTPA ion(-1)	THDTPAION
Th[C6H6NO6]+1	Thorium(IV) NTA ion(+1)	THNTAION
Th[HC10H12N2O8]+1	Thorium(IV) hydrogen EDTA ion(+1)	THHEDTAION
Th[HC14H18N3O10]	Thorium(IV) hydrogen DTPA	THHDTPA
Th[HC6H6NO6]	Thorium(IV) hydroxide NTA	THOHNTA
Th+4	Thorium ion(+4)	THION
Th2(OH)2+6	Dithorium(IV) dihydroxide ion(+6)	TH2OH2ION
ThBr4	Thorium(IV) bromide	THBR4
ThBr4.10H2O	Thorium(IV) bromide decahydrate	THBR4.10H2O
ThBr4.12H2O	Thorium(IV) bromide dodecahydarate	THBR4.12H2O
ThBr4.7H2O	Thorium(IV) bromide heptahydrate	THBR4.7H2O
ThC2O4+2	Thorium(IV) monooxalate ion(+2)	THC2O4ION
ThCl+2	Thorium(IV) dichloride ion(+2)	THCL2ION
ThCl+3	Thorium(IV) monochloride ion(+3)	THCLION
ThCl3+1	Thorium(IV) trichloride ion(+1)	THCL3ION
ThCl4	Thorium(IV) chloride	THCL4
ThCl4.2H2O	Thorium(IV) chloride dihydrate	THCL4.2H2O
ThCl4.7H2O	Thorium(IV) chloride heptahydrate	THCL4.7H2O
ThCl4.8H2O	Thorium(IV) chloride tetrahydrate	THCL4.4H2O
ThCl4.8H2O	Thorium(IV) chloride octahydrate	THCL4.8H2O
ThF+3	Thorium(IV) monofluoride ion(+3)	THFION
ThF2+2	Thorium(IV) difluoride ion(+2)	THF2ION
ThF3+1	Thorium(IV) trifluoride ion(+1)	THF3ION
ThF4	Thorium(IV) fluoride	THF4
ThF4.2.5H2O	Thorium(IV) fluoride 2.5 hydrate	THF4.2.5H2O
ThH2PO4+3	Thorium(IV) dihydrogen orthophosphate ion(+3)	THH2PO4ION
ThHC2O4+3	Thorium(IV) bicarbonate ion(+3)	THHC2O4ION
ThHPO4+2	Thorium(IV) hydrogen orthophosphate ion(+2)	THHPO4ION
ThI4	Thorium(IV) iodide	THI4
ThNO3+3	Thorium(IV) mononitrate ion(+3)	THNO3ION
ThO2	Thorium dioxide	THO2
ThOH+3	Thorium(IV) monohydroxide ion(+3)	THOHION
ThS2	Thorium(IV) sulfide	THS2
ThSO4+2	Thorium(IV) monosulfate ion(+2)	THSO4ION
Ti	Titanium	TIEL
Ti(CO3)2	Titanium(IV) carbonate	TIIVCO32

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ti(HCO3)2+1	Titanium(III) dibicarbonate ion(+1)	TIHCO32ION
Ti(HCO3)3	Titanium(III) bicarbonate	TIHCO33
Ti(HCO3)4	Titanium(IV) bicarbonate	TIIVHCO34
Ti(OH)2+1	Titanium(III) dihydroxide ion(+1)	TIIIIOH2ION
Ti(OH)2+2	Titanium(IV) dihydroxide ion(+2)	TIIVOH2ION
Ti(OH)3	Titanium(III) hydroxide	TIIIIOH3
Ti(OH)3+1	Titanium(IV) trihydroxide ion(+1)	TIIVOH3ION
Ti(OH)4	Titanium(IV) hydroxide	TIIVOH4
Ti(SO4)2	Titanium(IV) sulfate	TIIVSO42
Ti[C10H12N2O8]-1	Thorium(IV) EDTA ion(-1)	TIEDTAION
Ti[HC10H12N2O8]	Titanium(III) hydrogen EDTA	TIHEDTA
Ti+3	Titanium ion(+3)	TIIIIION
Ti+4	Titanium ion(+4)	TIIVION
Ti2(CO3)3	Titanium(III) carbonate	TIIII2CO33
Ti2(SO4)3	Titanium(III) sulfate	TIIII2SO43
Ti2O3	Titanium(III) oxide	TI2O3
TiCl+1	Titanium(IV) trichloride ion(+1)	TIIVCL3ION
TiCl+2	Titanium(III) monochloride ion(+2)	TIIIICLION
TiCl+3	Titanium(IV) monochloride ion(+3)	TIIVCLION
TiCl2+1	Titanium(III) dichloride ion(+1)	TIIIICL2ION
TiCl2+2	Titanium(IV) dichloride ion(+2)	TIIVCL2ION
TiCl3	Titanium(III) chloride	TIIIICL3
TiCl4	Titanium(IV) chloride	TIIVCL4
TiCl4-1	Titanium(III) tetrachloride ion(-1)	TIIIICL4ION
TiCO3+1	Titanium(III) carbonate ion(+1)	TIIIICO3ION
TiCO3+2	Titanium(IV) carbonate ion(+2)	TIIVCO3ION
TiF+2	Titanium(III) monofluoride ion(+2)	TIIIIFION
TiF+3	Titanium(IV) monofluoride ion(+3)	TIIVFION
TiF2+1	Titanium(III) difluoride ion(+1)	TIIIIF2ION
TiF2+2	Titanium(IV) difluoride ion(+2)	TIIVF2ION
TiF3	Titanium(III) fluoride	TIIIIF3
TiF3+1	Titanium(IV) trifluoride ion(+1)	TIIVF3ION
TiF4	Titanium(IV) fluoride	TIIVF4
TiF4-1	Titanium(III) tetrafluoride ion(-1)	TIIIIF4ION
TiHCO3+2	Titanium(III) monobicarbonate ion(+2)	TIHCO3ION
TiHCO3+3	Titanium(IV) bicarbonate ion(+3)	TIIVHCO3ION
TiO2	Titanium(IV) oxide	ANATASE
TiOH+2	Titanium(III) monohydroxide ion(+2)	TIIIIOHION
TiOH+3	Titanium(IV) monohydroxide ion(+3)	TIIVOHION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
TiOSO4	Titanyl(IV) sulfate	TIOST
TiOSO4.2H2O	Titanyl(IV) sulfate dihydrate	TIOST.2H2O
TiSO4+1	Titanium(III) sulfate ion(+1)	TIIIISO4ION
TiSO4+2	Titanium(IV) sulfate ion(+2)	TIIVSO4ION
Tl	Thallium	TLEL
Tl(OH)3	Thallium(III) hydroxide	TLIIIOH3
Tl+1	Thallium ion(+1)	TLION
Tl+3	Thallium ion(+3)	TLIIIION
TlOH	Thallium(I) hydroxide	TLOH
Tm	Thulium	TMEL
Tm(NO3)3	Thulium(III) nitrate	TMNO33
Tm(OH)[C6H6NO6]-1	Thulium(III) hydroxide NTA ion(-1)	TMOHNTAION
Tm(OH)2+1	Thulium(III) dihydroxide ion(+1)	TMOH2ION
Tm(OH)3	Thulium(III) hydroxide	TMOH3
Tm(OH)4-1	Thulium(III) tetrahydroxide ion(-1)	TMOH4ION
Tm(SO4)2-1	Thulium(III) disulfate ion(-1)	TMSO42ION
Tm[C10H12N2O8]-1	Thulium(III) EDTA ion(-1)	TMEDTAION
Tm[C14H18N3O10]-2	Thulium(III) DTPA ion(-2)	TMDTPAION
Tm[C2H3O2]+1	Thulium(III) diacetate ion(+1)	TMACET2ION
Tm[C2H3O2]+2	Thulium(III) monoacetate ion(+2)	TMACETION
Tm[C2H3O2]3	Thulium(III) acetate	TMACET3
Tm[C2O4]+1	Thulium(III) monooxalate ion(+1)	TMC2O4ION
Tm[C2O4]2-1	Thulium(III) dioxalate ion(-1)	TMC2O42ION
Tm[C4H4O6]+1	Thulium(III) tartrate ion(+1)	TMTRTRTION
Tm[C6H5O7]	Thulium(III) citrate	TMCTRT
Tm[C6H6NO6]	Thulium(III) NTA	TMNTA
Tm[C6H6NO6]2-3	Thulium(III) di-NTA ion(-3)	TMNTA2ION
Tm[H2C14H18N3O10]	Thulium(III) dihydrogen DTPA	TMH2DTPA
Tm[HC10H12N2O8]	Thulium(III) hydrogen EDTA	TMHEDTA
Tm[HC14H18N3O10]-1	Thulium(III) hydrogen DTPA ion(-1)	TMHDTPAION
Tm+3	Thulium ion(+3)	TMION
Tm2(CO3)3	Thulium(III) carbonate	TM2CO33
Tm2(SO4)3	Thulium(III) sulfate	TM2SO43
Tm2[C2O4]3	Thulium(III) oxalate	TM2C2O43
Tm2[C4H4O6]3	Thulium(III) tartrate	TM2TRTRT3
Tm2O3	Thulium(III) oxide	TM2O3
TmCl+2	Thulium(III) monochloride ion(+2)	TMCLION
TmCl2+1	Thulium(III) dichloride ion(+1)	TMCL2ION
TmCl3	Thulium(III) chloride	TMCL3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
TmCl4-1	Thulium(III) tetrachloride ion(-1)	TMCL4ION
TmCO3+1	Thulium(III) carbonate ion(+1)	TMCO3ION
TmF+2	Thulium(III) monofluoride ion(+2)	TMFION
TmF2+1	Thulium difluoride ion(+1)	TMF2ION
TmF3	Thulium(III) fluoride	TMF3
TmF4-1	Thulium(III) tetrafluoride ion(-1)	TMF4ION
TmH2PO4+2	Thulium(III) dihydrogen orthophosphate ion(+2)	TMH2PO4ION
TmHCO3+2	Thulium bicarbonate ion(+2)	TMHCO3ION
TmNO3+2	Thulium(III) nitrate ion(+2)	TMNO3ION
TmOH+2	Thulium(III) hydroxide ion(+2)	TMOHION
TmPO4	Thulium(III) orthophosphate	TMPO4
TmSO4+1	Thulium(III) monosulfate ion(-1)	TMSO4ION
U	Uranium	UEL
U(CO3)2	Uranium(IV) carbonate	UIVCO32
U(HPO4)2	Uranium(IV) hydrogen orthophosphate	UIVHPO42
U(HPO4)2.4H2O	Uranium(IV) hydrogen orthophosphate tetrahydrate	UIVHPO42.4H2O
U(OH)2+2	Uranium(IV) dihydroxide ion(+2)	UIVOH2ION
U(OH)3	Uranium(III) hydroxide	UIIIOH3
U(OH)3+1	Uranium(IV) trihydroxide ion(+1)	UIVOH3ION
U(OH)4	Uranium(IV) hydroxide	UIVOH4
U(OH)5-1	Uranium(IV) pentahydroxide ion(-1)	UIVOH5ION
U(SO3)2	Uranium(IV) sulfite	UIVSO32
U(SO4)2	Uranium(IV) sulfate	UIVSO42
U[C10H12N2O8]	Uranium(IV) EDTA	UIVEDTA
U[C2H3O2]+2	Uranium(III) monoacetate ion(+1)	UIIIACION
U[C2H3O2]2+1	Uranium(III) diacetate ion(+1)	UIIIAC2ION
U[C2H3O2]3	Uranium(III) acetate	UIIIAC3
U[HCOO]+2	Uranium(III) monoformate ion(+2)	UCOOHION
U[HCOO]2+1	Uranium(III) diformate ion(+1)	UCOOH2ION
U[HCOO]3	Uranium(III) formate	UCOOH3
U+3	Uranium ion(+3)	UIIIION
U+4	Uranium ion(+4)	UIVION
U3(PO4)4	Uranium(IV) orthophosphate	UIV3PO44
UBr2Cl	Uranium(III) dibromide chloride	UBR2CL
UBr2Cl2	Uranium(IV) dibromide dichloride	UBR2CL2
UBr2I2	Uranium(IV) dibromide diiodide	UBR2I2
UBr3	Uranium(III) bromide	UIIIBR3
UBr3Cl	Uranium(IV) tribromide chloride	UBR3CL

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
UBr3I	Uranium(IV) tribromide iodide	UBR3I
UBr4	Uranium(IV) bromide	UIVBR4
UBr5	Uranium(V) bromide	UVBR5
UBrCl2	Uranium(III) bromide dichloride	UBRCL2
UBrCl3	Uranium(IV) bromide trichloride	UBRCL3
UBrI3	Uranium(IV) bromide triiodide	UBRI3
UCl+3	Uranium(IV) monochloride ion(+3)	UIVCLION
UCl2F2	Uranium(IV) dichloride difluoride	UCL2F2
UCl2I2	Uranium(IV) dichloride diiodide	UCL2I2
UCl3	Uranium(III) chloride	UIIICL3
UCl3F	Uranium(IV) trichloride fluoride	UCL3F
UCl3I	Uranium(IV) trichloride iodide	UCL3I
UCl4	Uranium(IV) chloride	UIVCL4
UCl5	Uranium(V) chloride	UVCL5
UCl6	Uranium(VI) chloride	UCL6
UClF3	Uranium(IV) chloride trifluoride	UCLF3
UClI3	Uranium(IV) chloride triiodide	UCLI3
UF+3	Uranium(IV) monofluoride ion(+3)	UIVFION
UF2+2	Uranium(IV) difluoride ion(+2)	UIVF2ION
UF3	Uranium(III) fluoride	UIIIF3
UF3+1	Uranium(IV) trifluoride ion(+1)	UIVF3ION
UF4	Uranium(IV) fluoride	UIVF4
UF4.2.5H2O	Uranium(IV) fluoride 2.5 hydrate	UIVF4.2.5H2O
UF5	Uranium(V) fluoride	UVF5
UF6	Uranium(VI) fluoride	UVIF6
UI3	Uranium(III) iodide	UIOD3
UI4	Uranium(IV) iodide	UIVI4
UO2	Uranium(IV) oxide	UIVO2
UO2(C2O4)2-2	Uranyl(VI) dioxalate ion(-2)	UO2C2O42ION
UO2(C2O4)3-4	Uranyl(VI) trioxalate ion(-4)	UO2C2O43ION
UO2(CO3)2-2	Uranyl(VI) dicarbonate ion(-2)	UO2CO32ION
UO2(CO3)3-4	Uranyl(VI) tricarbonate ion(-4)	UO2CO33ION
UO2(IO3)2	Uranyl(VI) iodate	UO2IO32
UO2(NO3)2	Uranyl(VI) nitrate	UO2NO32
UO2(NO3)2.2H2O	Uranyl(VI) nitrate dihydrate	UO2NO32.2H2O
UO2(NO3)2.3H2O	Uranyl(VI) nitrate trihydrate	UO2NO32.3H2O
UO2(NO3)2.6H2O	Uranyl(VI) nitrate hexahydrate	UO2NO32.6H2O
UO2(OH)2	Uranyl(VI) hydroxide	UO2OH2
UO2(SO4)2-2	Uranyl(VI) disulfate ion(-2)	UO2SO42ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
UO2[C2H3O2]+1	Uranyl(VI) monoacetate ion(+1)	UO2ACION
UO2[C2H3O2]2	Uranyl(VI) acetate	UO2AC2
UO2[C2H3O2]3-1	Uranyl(VI) triacetate ion(-1)	UO2AC3ION
UO2[C6H5O7]-1	Uranyl(VI) monocitrate ion(-1)	UO2CTRTION
UO2[C6H6NO6]-1	Uranyl(VI) NTA ion(-1)	UO2NTAION
UO2[HC10H12N2O8]-1	Uranyl(VI) hydrogen EDTA ion(-1)	UO2HEDTAION
UO2[HC6H5O7]	Uranyl(VI) hydrogen citrate	UO2HCTR
UO2[HC6H6NO6]	Uranyl(VI) hydrogen NTA	UO2HNTA
UO2+1	Uranyl(V) ion(+1)	UVO2ION
UO2+2	Uranyl(VI) ion(+2)	UO2ION
UO2Br2	Uranyl(VI) bromide	UO2BR2
UO2Br2.1H2O	Uranyl(VI) bromide monohydrate	UO2BR2.1H2O
UO2Br2.3H2O	Uranyl(VI) bromide trihydrate	UO2BR2.3H2O
UO2C2O4	Uranyl(VI) oxalate	UO2C2O4
UO2C2O4.3H2O	Uranyl(VI) oxalate trihydrate	UO2C2O4.3H2O
UO2Cl+1	Uranyl(VI) monochloride ion(+1)	UO2CLION
UO2Cl2	Uranyl(VI) chloride	UO2CL2
UO2Cl2.3H2O	Uranyl(VI) chloride trihydrate	UO2CL2.3H2O
UO2Cl2.H2O	Uranyl(VI) chloride monohydrate	UO2CL2.H2O
UO2CO3	Uranyl(VI) carbonate	UO2CO3
UO2F+1	Uranyl(VI) monofluoride ion(+1)	UO2FION
UO2F2	Uranyl(VI) fluoride	UO2F2
UO2F2.3H2O	Uranyl(VI) fluoride trihydrate	UO2F2.3H2O
UO2F3-1	Uranyl(VI) trifluoride ion(-1)	UO2F3ION
UO2F4-2	Uranyl(VI) tetrafluoride ion(-2)	UO2F4ION
UO2IO3+1	Uranyl(VI) monoiodate ion(+1)	UO2IO3ION
UO2OH	Uranyl(V) hydroxide	UVO2OH
UO2OH+1	Uranyl(VI) monohydroxide ion(+1)	UO2OHION
UO2SO3	Uranyl(VI) sulfite	UO2SO3
UO2SO4	Uranyl(VI) sulfate	UO2SO4
UO2SO4.3H2O	Uranyl(VI) sulfate trihydrate	UO2SO4.3H2O
UOH+3	Uranium(IV) monohydroxide ion(+3)	UIVOHION
USO4+2	Uranium(IV) sulfate ion(+2)	UIVSO4ION
V	Vanadium	VEL
V(C2O4)2-1	Vanadium(III) dioxalate ion(-1)	VC2O42ION
V(OH)3	Vanadium(III) hydroxide	VIIIOH3
V+2	Vanadium ion(+2)	VIIION
V+3	Vanadium ion(+3)	VIIIION
V2(C2O4)3	Vanadium(III) oxalate	V2C2O43

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
V2O3	Vanadium(III) oxide	V2O3
V2O4	Vanadium(IV) oxide	V2O4
V2O5	Vanadium(V) pentoxide	V2O5
VBr3	Vanadium(III) bromide	VBR3
VC2O4+1	Vanadium(III) monooxalate ion(+1)	VC2O4ION
VCl3	Vanadium(III) chloride	VCL3
VF3	Vanadium(III) fluoride	VF3
VO(C2O4)2-2	Vanadyl(IV) dioxalate ion(-2)	VOC2O42ION
VO(OH)+1	Vanadyl(IV) monohydroxide ion(+1)	VOOHION
VO(OH)2	Vanadyl(IV) hydroxide	VOOH2
VO(OH)3	Vanadate(V) hydroxide	VOOH3
VO+2	Vanadyl ion(+2)	VOION
VO2+1	Vanadite ion(+1)	VO2ION
VO2Cl	Vanadite(V) chloride	VO2CL
VO2F	Vanadite(V) fluoride	VO2F
VO2F2-1	Vanadite(V) difluoride ion(-1)	VO2F2ION
VO2F3-2	Vanadite(V) trifluoride ion(-2)	VO2F3ION
VO2OH	Vanadite(V) hydroxide	VO2OH
VOC2O4	Vanadyl(IV) oxalate	VOC2O4
VOCl+1	Vanadyl monochloride ion(+1)	VOCLION
VOCl2	Vanadyl(IV) chloride	VOCL2
VOF+1	Vanadyl(IV) monofluoride ion(+1)	VOFION
VOF2	Vanadyl(IV) fluoride	VOF2
VOF3-1	Vanadyl(IV) trifluoride ion(-1)	VOF3ION
VOF4-2	Vanadyl(IV) tetrafluoride ion(-2)	VOF4ION
VOH+2	Vanadium(III) monohydroxide ion(+2)	VIIIOHION
VOSO4	Vanadyl(IV) sulfate	VOSO4
VOSO4.6H2O	Vanadyl(IV) sulfate hexahydrate	VOSO4.6H2O
W	Tungsten	WEL
WO4-2	Tungsten(VI) tetraoxide ion(-2)	WO4ION
Xe	Xenon	XE
Y	Yttrium	EYEL
Y(C2O4)2-1	Yttrium(III) dioxalate ion(-1)	EYC2O42ION
Y(C2O4)3-3	Yttrium(III) trioxalate ion(-3)	EYC2O43ION
Y(NO3)2+1	Yttrium dinitrate ion(+1)	EYNO32ION
Y(NO3)3	Yttrium nitrate	EYNO33
Y(OH)[C6H6NO6]-1	Yttrium hydroxide NTA ion(-1)	EYOHNTAION
Y(OH)2+1	Yttrium dihydroxide ion(+1)	EYOH2ION
Y(OH)3	Yttrium hydroxide	EYOH3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Y(OH)4-1	Yttrium tetrahydroxide ion(-1)	EYOH4ION
Y(SO4)2-1	Yttrium disulfate ion(-1)	EYSO42ION
Y[C10H12N2O8]-1	Yttrium(III) EDTA ion(-1)	EYEDTAION
Y[C14H18N3O10]-2	Yttrium(III) DTPA ion(-2)	EYDTPAION
Y[C2H3O2]+2	Yttrium monoacetate ion(+2)	EYACETION
Y[C2H3O2]2+1	Yttrium diacetate ion(+1)	EYACET2ION
Y[C2H3O2]3	Yttrium acetate	EYACET3
Y[C4H4O6]+1	Yttrium tartrate ion(+1)	EYTARTRTION
Y[C6H6NO6]	Yttrium NTA	EYNTA
Y[C6H6NO6]-3	Yttrium di-NTA ion(-3)	EYNTA2ION
Y[H2C14H18N3O10]	Yttrium dihydrogen DTPA	EYH2DTPA
Y[HC10H12N2O8]	Yttrium hydrogen EDTA	EYHEDTA
Y[HC14H18N3O10]-1	Yttrium hydrogen DTPA ion(-1)	EYHDTPAION
Y+3	Yttrium ion(+3)	EYION
Y2(C2O4)3	Yttrium oxalate	EY2C2O43
Y2(SO4)3	Yttrium sulfate	EY2SO43
Y2(SO4)3.8H2O	Yttrium sulfate octahydrate	EY2SO43.8H2O
Y2(WO4)3	Yttrium tungstate(VI)	EY2WO43
Y2[C4H4O6]3	Yttrium tartrate	EY2TARTRT3
Y2O3	Yttrium oxide	EY2O3
Yb	Ytterbium	EYBEL
Yb(NO3)3	Ytterbium(III) nitrate	EYBNO33
Yb(OH)[C6H6NO6]-1	Ytterbium(III) hydroxide NTA ion(-1)	EYBOHNTAION
Yb(OH)2	Ytterbium(II) hydroxide	EYBIIOH2
Yb(OH)2+1	Ytterbium(III) dihydroxide ion(+1)	EYBOH2ION
Yb(OH)3	Ytterbium(III) hydroxide	EYBOH3
Yb(OH)4-1	Ytterbium(III) tetrahydroxide ion(-1)	EYBOH4ION
Yb(SO4)2-1	Ytterbium(III) disulfate ion(-1)	EYBSO42ION
Yb[C10H12N2O8]-1	Ytterbium(III) EDTA ion(-1)	EYBEDTAION
Yb[C14H18N3O10]-2	Ytterbium(III) DTPA ion(-2)	EYBDTPAION
Yb[C2H3O2]+2	Ytterbium(III) monoacetate ion(+2)	EYBACETION
Yb[C2H3O2]2+1	Ytterbium(III) diacetate ion(+1)	EYBACET2ION
Yb[C2H3O2]3	Ytterbium(III) acetate	EYBACET3
Yb[C4H4O6]+1	Ytterbium(III) monotartrate ion(+1)	EYBTRTRTION
Yb[C6H5O7]	Ytterbium(III) citrate	EYBCTRT
Yb[C6H6NO6]	Ytterbium(III) NTA	EYBNTA
Yb[C6H6NO6]2-3	Ytterbium(III) di-NTA ion(-3)	EYBNTA2ION
Yb[CHO2]+2	Ytterbium(III) monoformate ion(+2)	EYBFORION
Yb[CHO2]2+1	Ytterbium(III) diformate ion(+1)	EYBFOR2ION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Yb[CHO2]3	Ytterbium(III) formate	EYBFOR3
Yb[H2C14H18N3O10]	Ytterbium(III) dihydrogen DTPA	EYBH2DTPA
Yb[HC10H12N2O8]	Ytterbium(III) hydrogen EDTA	EYBHEDTA
Yb[HC14H18N3O10]-1	Ytterbium(III) hydrogen DTPA ion(-1)	EYBHDTPAION
Yb+2	Ytterbium ion(+2)	EYBIIION
Yb+3	Ytterbium ion(+3)	EYBIIIION
Yb2(CO3)3	Ytterbium(III) carbonate	EYB2CO33
Yb2(SO4)3	Ytterbium(III) sulfate	EYB2SO43
Yb2(SO4)3.8H2O	Ytterbium(III) sulfate octahydrate	EYB2SO43.8H2O
Yb2[C4H4O6]3	Ytterbium(III) tartrate	EYB2TRTRT3
YbCl+2	Ytterbium(III) monochloride ion(+2)	EYBCLION
YbCl2+1	Ytterbium(III) dichloride ion(+1)	EYBCL2ION
YbCl3	Ytterbium(III) chloride	EYBCL3
YbCL3.6H2O	Ytterbium(III) chloride hexahydrate	EYBCL3.6H2O
YbCl4-1	Ytterbium(III) tetrachloride ion(-1)	EYBCL4ION
YbCO3+1	Ytterbium(III) carbonate ion(+1)	EYBCO3ION
YbF+2	Ytterbium(III) monofluoride ion(+2)	EYBFION
YbF2+1	Ytterbium(III) difluoride ion(+1)	EYBF2ION
YbF3	Ytterbium(III) fluoride	EYBF3
YbF4-1	Ytterbium(III) tetrafluoride ion(-1)	EYBF4ION
YbH2PO4+2	Ytterbium(III) dihydrogen orthophosphate ion(+2)	EYBH2PO4ION
YbHCO3+2	Ytterbium(III) bicarbonate ion(+2)	EYBHCO3ION
YbNO3+2	Ytterbium(III) mononitrate ion(+2)	EYBNO3ION
YbOH+2	Ytterbium(III) monohydroxide ion(+2)	EYBOHION
YbPO4	Ytterbium(III) orthophosphate	EYBPO4
YBr+2	Yttrium(III) monobromide ion(+2)	EYBRION
YBr3	Yttrium(III) bromide	EYBR3
YbSO4+1	Ytterbium(III) monosulfate ion(+1)	EYBSO4ION
YC2O4+1	Yttrium(III) monooxalate ion(+1)	EYC2O4ION
YCl+2	Yttrium(III) monochloride ion(+2)	EYCLION
YCl3	Yttrium(III) chloride	EYCL3
YCl3.6H2O	Yttrium(III) chloride hexahydrate	EYCL3.6H2O
YF+2	Yttrium monofluoride ion(+2)	EYFION
YF2+1	Yttrium difluoride ion(+1)	EYF2ION
YF3	Yttrium fluoride	EYF3
YH2PO4+2	Yttrium dihydrogen orthophosphate ion(+2)	EYH2PO4ION
YNO3+2	Yttrium mononitrate ion(+2)	EYNO3ION
YOH+2	Yttrium monohydroxide ion(+2)	EYOHION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
YPO4	Yttrium orthophosphate	EYPO4
YPO4.2H2O	Yttrium orthophosphate dihydrate	EYPO4.2H2O
YSO4+1	Yttrium monosulfate ion(+1)	EYSO4ION
Zn	Zinc	ZNEL
Zn(C2O4)2-2	Zinc dioxalate ion(-2)	ZNC2O42ION
Zn(C2O4)3-4	Zinc trioxalate ion(-4)	ZNC2O43ION
Zn(CN)2	Zinc cyanide	ZNCN2
Zn(CN)3-1	Zinc tricyanide ion(-1)	ZNCN3ION
Zn(CN)4-2	Zinc tetracyanide ion(-2)	ZNCN4ION
Zn(HC2O4)2	Zinc hydrogen oxalate	ZNHC2O42
Zn(HCO3)2	Zinc bicarbonate	ZNHCO32
Zn(HS)2	Zinc bisulfide	ZNHS2
Zn(HSO3)2	Zinc bisulfite	ZNHSO32
Zn(HSO4)2	Zinc bisulfate	ZNHSO42
Zn(NH2CO2)2	Zinc carbamate	ZNNH2CO22
Zn(NH3)2+2	Zinc diammonia ion(+2)	ZNNH32ION
Zn(NH3)3+2	Zinc triammonia ion(+2)	ZNNH33ION
Zn(NH3)4+2	Zinc tetraammonia ion(+2)	ZNNH34ION
Zn(NO3)2	Zinc nitrate	ZNNO32
Zn(NO3)2.1H2O	Zinc nitrate monohydrate	ZNNO32.1H2O
Zn(NO3)2.2H2O	Zinc nitrate dihydrate	ZNNO32.2H2O
Zn(NO3)2.4H2O	Zinc nitrate tetrahydrate	ZNNO32.4H2O
Zn(NO3)2.6H2O	Zinc nitrate hexahydrate	ZNNO32.6H2O
Zn(OH)[C10H12N2O8]-3	Zinc hydroxide EDTA ion(-3)	ZNOHEDTAION
Zn(OH)[C6H6NO6]-2	Zinc hydroxide NTA ion(-2)	ZNOHNTAION
Zn(OH)2	Zinc hydroxide, amorphous	ZNOH2
Zn(OH)3-1	Zinc trihydroxide ion(-1)	ZNOH3ION
Zn(OH)4-2	Zinc tetrahydroxide ion(-2)	ZNOH4ION
Zn(SCN)2	Zinc dithiocyanate	ZNSCN2
Zn(SCN)3-1	Zinc trithiocyanate ion(-1)	ZNSCN3ION
Zn(SCN)4-2	Zinc tetrathiocyanate ion(-4)	ZNSCN4ION
Zn[C10H12N2O8]-2	Zinc EDTA ion(-2)	ZNEDTAION
Zn[C14H18N3O10]-3	Zinc DTPA ion(-3)	ZNDTPAION
Zn[C2H14NO]2+2	Zinc di(2-aminoethanol) ion(+2)	ZNMEXH2ION
Zn[C2H3O2]+1	Zinc monoacetate ion(+1)	ZNACETION
Zn[C2H3O2]2	Zinc acetate	ZNACET2
Zn[C2H3O2]3-1	Zinc triacetate ion(-1)	ZNACET3ION
Zn[C2H3O3]+1	Zinc monoglycolate ion(+1)	ZNGLYCOLION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Zn[C2H3O3]2	Zinc glycolate	ZNGLYCOL2
Zn[C2H4NO2]2	Zinc diglycine	ZNGLYCIN2
Zn[C2H7NO]+2	Zinc mono(2-aminoethanol) ion(+2)	ZNMEXHION
Zn[C2H7NO]3+2	Zinc tri(2-aminoethanol) ion(+2)	ZNMEXH3ION
Zn[C2H8N2]+2	Zinc mono(ethylenediamine) ion(+2)	ZNEDAION
Zn[C2H8N2]2+2	Zinc di(ethylenediamine) ion(+2)	ZNEDA2ION
Zn[C2H8N2]3+2	Zinc tri(ethylenediamine) ion(+2)	ZNEDA3ION
Zn[C3H6NO2]+1	Zinc monoalanate ion(+1)	ZNALANION
Zn[C3H6NO2]2	Zinc dialanate	ZNALAN2
Zn[C4H4O6]	Zinc tartrate	ZNTRTRT
Zn[C5H13NO2]2+2	Zinc di(diethanolmethylamine) ion(+2)	ZNMDEXH2ION
Zn[C5H13NO2]3+2	Zinc tri(diethanolmethylamine) ion(+2)	ZNMDEXH3ION
Zn[C5H13NO2]4+2	Zinc tetra(diethanolmethylamine) ion(+2)	ZNMDEXH4ION
Zn[C5H15NO2]+2	Zinc mono(diethanolmethylamine) ion(+2)	ZNMDEXHION
Zn[C6H5O7]-1	Zinc citrate ion(-1)	ZNCTRTION
Zn[C6H6NO6]-1	Zinc NTA ion(-1)	ZNNTAION
Zn[C6H6NO6]2-4	Zinc di-NTA ion(-4)	ZNNTA2ION
Zn[H2C10H12N2O8]	Zinc dihydrogen EDTA	ZNH2EDTA
Zn[H2C14H18N3O10]-1	Zinc dihydrogen DTPA ion(-1)	ZNH2DTPAION
Zn[H2C6H5O7]+1	Zinc dihydrogen citrate ion(+1)	ZNH2CTRTION
Zn[H3C14H18N3O10]	Zinc trihydrogen DTPA	ZNH3DTPA
Zn[HC10H12N2O8]-1	Zinc hydrogen EDTA ion(-1)	ZNHEDTAION
Zn[HC14H18N3O10]-2	Zinc hydrogen DTPA ion(-2)	ZNHDTPAION
Zn[HC6H5O7]	Zinc hydrogen citrate	ZNHCTRT
Zn[HC6H6NO6]	Zinc hydrogen NTA	ZNHNTA
Zn[HCOO]+1	Zinc monoformate ion(+1)	ZNCOOHION
Zn[HCOO]2	Zinc formate	ZNCOOH2
Zn[HCOO]2.2H2O	Zinc formate dihydrate	ZNCOOH2.2H2O
Zn+2	Zinc ion(+2)	ZNION
Zn2[C14H18N3O10]-1	Dizinc DTPA ion(-1)	ZN2DTPAION
Zn3(PO4)2	Zinc orthophosphate	ZN3PO42
Zn3(PO4)2.1H2O	Zinc orthophosphate monohydrate	ZN3PO42.1H2O
Zn3(PO4)2.2H2O	Zinc orthophosphate dihydrate	ZN3PO42.2H2O
Zn3(PO4)2.4H2O	Zinc orthoposphate tetrahydrate	ZN3PO42.4H2O
ZnBr+1	Zinc bromide ion(+1)	ZNBRION
ZnBr2	Zinc bromide	ZNBR2
ZnBr2.2H2O	Zinc bromide dihydrate	ZNBR2.2H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
ZnBr3-1	Zinc tribromide ion(-1)	ZNBR3ION
ZnC2H4NO2+1	Zinc monoglycine ion(+1)	ZNGLYCINION
ZnC2O4	Zinc oxalate	ZNC2O4
ZnC2O4.2H2O	Zinc oxalate dihydrate	ZNC2O4.2H2O
ZnCl+1	Zinc chloride ion(+1)	ZNCLION
ZnCl2	Zinc chloride	ZNCL2
ZnCl2.1H2O	Zinc chloride monohydrate	ZNCL2.1H2O
ZnCl2.3H2O	Zinc chloride trihydrate	ZNCL2.3H2O
ZnCl2.5ZnO	Zinc dichloride pentoxide	ZN6CL2O5
ZnCl2.5ZnO.8H2O	Zinc dichloride pentoxide octahydrate	ZN6CL2O5.8H2O
ZnCl3-1	Zinc trichloride ion(-1)	ZNCL3ION
ZnCN+1	Zinc monocyanide ion(+1)	ZNCNION
ZnCO3	Zinc carbonate	ZNCO3
ZnF+1	Zinc monofluoride ion(+1)	ZNFION
ZnF2	Zinc fluoride	ZNF2
ZnF2.4H2O	Zinc fluoride tetrahydrate	ZNF2.4H2O
ZnH2PO4+1	Zinc dihydrogen orthophosphate ion(+1)	ZNH2PO4ION
ZnHC2O4+1	Zinc hydrogen oxalate ion(+1)	ZNHC2O4ION
ZnHCO3+1	Zinc bicarbonate ion(+1)	ZNHCO3ION
ZnHPO4	Zinc hydrogen orthophosphate	ZNHPO4
ZnI+1	Zinc monoiodide ion(+2)	ZNIION
ZnI2	Zinc iodide	ZNI2
ZnI2.2H2O	Zinc iodide dihydrate	ZNI2.2H2O
ZnMoO4	Zinc molybdate(VI)	ZNMOO4
ZnNH3+2	Zinc monoammonia ion(+2)	ZNNH3ION
ZnNO3+1	Zinc nitrate ion(+1)	ZNNO3ION
ZnOH+1	Zinc monohydroxide ion(+1)	ZNOHION
ZnS	Zinc sulfide	ZNS
ZnSCN+1	Zinc monothiocyanate ion(+1)	ZNSCNION
ZnSe	Zinc selenide	ZNSE
ZnSeO3	Zinc selenite	ZNSEO3
ZnSeO3.2H2O	Zinc selenite dihydrate	ZNSEO3.2H2O
ZnSeO3.H2O	Zinc selenite monohydrate	ZNSEO3.1H2O
ZnSeO4	Zinc selenate	ZNSEO4
ZnSeO4.6H2O	Zinc selenate hexahydrate	ZNSEO4.6H2O
ZnSeO4.H2O	Zinc selenate monohydrate	ZNSEO4.1H2O
ZnSO3	Zinc sulfite	ZNSO3
ZnSO4	Zinc sulfate	ZNSO4
ZnSO4.1H2O	Zinc sulfate monohydrate	ZNSO4.1H2O

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
ZnSO4.6H2O	Zinc sulfate hexahydrate	ZNSO4.6H2O
ZnSO4.7H2O	Zinc sulfate heptahydrate	ZNSO4.7H2O
ZnWO4	Zinc tungstate(VI)	ZNWO4
Zr	Zirconium	ZREL
Zr(C2O4)2	Zirconium oxalate	ZRC2O42
Zr(NO3)2+2	Zirconium dinitrate ion(+2)	ZRNO32ION
Zr(OH)[C6H6NO6]	Zirconium hydroxide NTA	ZROHNTA
Zr(OH)2+2	Zirconium dihydroxide ion(+2)	ZROH2ION
Zr(OH)3+1	Zirconium trihydroxide ion(+1)	ZROH3ION
Zr(OH)4	Zirconium hydroxide	ZROH4
Zr(OH)5-1	Zirconium pentahydroxide ion(-1)	ZROH5ION
Zr(SO4)2	Zirconium sulfate	ZRSO42
Zr(SO4)2.4H2O	Zirconium sulfate tetrahydrate	ZRSO42.4H2O
Zr[C10H12N2O8]	Zirconium EDTA	ZREDTA
Zr[C6H6NO6]+1	Zirconium NTA ion(+1)	ZRNTAION
Zr+4	Zirconium ion(+4)	ZRION
ZrBr4	Zirconium bromide	ZRBR4
ZrC2O4+2	Zirconium monooxalate ion(+2)	ZRC2O4ION
ZrCl+3	Zirconium monochloride ion(+3)	ZRCLION
ZrCl2+2	Zirconium dichloride ion(+2)	ZRCL2ION
ZrCl3+1	Zirconium trichloride ion(+1)	ZRCL3ION
ZrCl4	Zirconium tetrachloride	ZRCL4
ZrF+3	Zirconium monofluoride ion(+3)	ZRFION
ZrF2+2	Zirconium difluoride ion(+2)	ZRF2ION
ZrF3+1	Zirconium trifluoride ion(+1)	ZRF3ION
ZrF4	Zirconium fluoride	ZRF4
ZrF4.1H2O	Zirconium fluoride monohydrate	ZRF4.1H2O
ZrF4.3H2O	Zirconium fluoride trihydrate	ZRF4.3H2O
ZrF5-1	Zirconium pentafluoride ion(-1)	ZRF5ION
ZrF6-2	Zirconium hexafluoride ion(-2)	ZRF6ION
ZrI4	Zirconium iodide	ZRI4
ZrNO3+3	Zirconium mononitrate ion(+3)	ZRNO3ION
ZrO2	Zirconium oxide	ZRO2
ZrOCl2	Zirconium oxide dichloride	ZROCL2
ZrOCl2.2H2O	Zirconium oxide dichloride dihydrate	ZROCL2.2H2O
ZrOCL2.3.5H2O	Zirconium oxide dichloride 3.5 hydrate	ZROCL2.3.5H2O
ZrOCl2.6H2O	Zirconium oxide dichloride hexahydrate	ZROCL2.6H2O
ZrOCl2.8H2O	Zirconium oxide dichloride octahydrate	ZROCL2.8H2O
ZrOH+3	Zirconium monohydroxide ion(+3)	ZROHION

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
ZrS2	Zirconium sulfide	ZRS2
ZrSO4+2	Zirconium sulfate ion(+2)	ZRSO4ION
ZrSO42.1H2O	Zirconium sulfate monohydrate	ZRSO42.1H2O

B HYSYS OLI Interface GEOCHEM Database

B.1 List of HYSYS OLI Interface GEOCHEM Database

The GEOCHEM database is seperated from the full database. It contains many solids that only form via thermodynamic equilibrium after long periods of time (thousands of years). These solids form in nature and are often different from the form of a solid, made up of the same elements, that may form in a much shorter amount of time (usually instantly) within a process. Thus, the GEOCHEM solids tend to form through aging of the aqueous environment in contact with a source of the elements comprising the solids. The following list includes the HYSYS OLI Interface Name, Formula and the Common/IUPAC name. To find or match an electrolyte component in HYSYS, select the GEOCHEM checkbox in the Full database and then select the appropriate component or type in the HYSYS OLI Interface name.

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
12CaO.7Al2O3	Dodecacalcium tetradecaaluminum tritriacontaoxide	CA12AL14O33
Al2O3	Aluminum oxide	AL2O3
Al2Si2O5(OH)4	Dialuminum disilicon pentaoxide tetrahydroxide	KAOLINITE
Al2Si4O10(OH)2	Dialuminum tetrasilicon decaoxide dihydroxide	AL2SILICAT
Al2SiO5	Dialuminum silicon pentaoxide	ANDALUSITE
Al2SiO5	Dialuminum silicon pentaoxide	KYANITE
Al2SiO5	Dialuminum silicon pentaoxide	SILLIMANIT
AlO(OH)	Aluminum oxide hydroxide	DIASPORE
Ba2SiO4	Dibarium silicon tetraoxide	BA2SIO4
BaSiO3	Barium silicon trioxide	BASIO3
Bi2O3	Bismuth oxide	BI2O3
Ca(Al2Si4O12).2H2O	Calcium dialuminum tetrasilicon dodecaoxide dihydrate	WAIRAKITE.2H2O
Ca2Al2Si3O10(OH)2	Dicalcium dialuminum trisilicon decaoxide dihydroxide	PREHNITE

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Ca2Al2SiO7	Dicalcium dialuminum silicon heptaoxide	CA2AL2SIO7
Ca2Al3Si3O12(OH)	Dicalcium trialuminum trisilicon dodecaoxide hydroxide	CLINZOISIT
Ca2Al3Si3O12(OH)	Dicalcium trialuminum trisilicon dodecaoxide hydroxide	ZOISITE
Ca2Mg5Si8O22(OH)2	Dicalcium pentamagnesium octasilicon docosaoxide dihydroxide	TREMOLITE
Ca2MgSi2O7	Dicalcium magnesium disilicon heptaoxide	CA2MGSI2O7
Ca2SiO4	Dicalcium silicon tetraoxide	CA2SIO4
Ca2SiO4	Dicalcium silicon tetraoxide	OLIVINE
Ca3Al2(SiO4)3	Tricalcium dialuminum trisilicon dodecaoxide	GROSSULAR
Ca3Fe2Si3O12	Tricalcium diiron trisilicon dodecaoxide	ANDRADITE
Ca3MgSi2O8	Tricalcium magnesium disilicon octaoxide	CA3MGSIO42
Ca5(OH)(PO4)3	Pentacalcium hydroxide phosphate	CA5OHPO43
CaAl2(Al2Si2O10)(OH)2	Calcium tetraaluminum disilicon decaoxide dihydroxide	MARGARITE
CaAl2Si2O7(OH)2	Calcium dialuminum disilicon heptaoxide dihydroxide	LAWSONITE
CaAl2Si2O7(OH)2.1H2O	Calcium dialuminum disilicon heptaoxide dihydroxide monohydrate	LAWSONITE.1H2O
CaAl2Si2O8	Calcium dialuminum disilicon octaoxide	CAAL2SI2O8
CaAl2Si4O12	Calcium dialuminum tetrasilicon dodecaoxide	LMNTITE
CaAl2Si4O12	Calcium dialuminum tetrasilicon dodecaoxide	WAIRAKITE
CaAl2Si4O12.4H2O	Calcium dialuminum tetrasilicon dodecaoxide tetrahydrate	LMNTITE.4H2O
CaAl2SiO6	Calcium dialuminum silicon hexaoxide	CAALALSIO6
CaCO3	Calcium carbonate	ARAGONITE
CaFe2O4	Calcium diiron tetraoxide	CAFE2O4
CaFeSi2O6	Calcium iron disilicon hexaoxide	CAFESIO32
CaMg(CO3)2	Calcium magnesium carbonate	DISDOL
CaMg(CO3)2	Calcium magnesium carbonate	DOLOMITE
CaMg(CO3)2	Calcium magnesium carbonate	ORDDOL
CaMg3(CO3)4	Calcium trimagnesium carbonate	CAMG3CO34
CaMgSi2O6	Calcium magnesium disilicon hexaoxide	DIOPSIDE
CaMgSi2O6	Calcium magnesium disilicon hexaoxide	CAMGSIO32
CaMgSiO4	Calcium magesium silicon tetraoxide	CAMGSIO4
CaO	Calcium oxide	CAO
CaSiO3	Calcium silicon trioxide	CASIO3

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
CaSiO3	Calcium silicon trioxide	PWOLLAST
CaTiSiO5	Calcium titanium silicon pentaoxide	SPHENE
CdSiO3	Cadmium silicon trioxide	CDSIO3
Co2SiO4	Dicobalt silicon tetraoxide	CO2SIO4
Cr2O3	Chromium(III) oxide	CR2O3
Cu2(OH)2CO3	Dicopper dihydroxide carbonate	CU2OH2CO3
Cu3(OH)2(CO3)2	Tricopper dihydroxide dicarbonate	CU3OH2CO32
Cu5FeS4	Pentacopper(I) iron(III) tetrasulfide	CU5FEIIIS4
CuFeS2	Copper(II) iron(II) disulfide	CUFEIIS2
CuO	Copper(II) oxide	CUO
Dy2O3	Dysprosium oxide	DY2O3
Er2O3	Erbium oxide	ER2O3
Eu2O3	Europium oxide	EU2O3
EuO	Europium(II) oxide	EUIIO
Fe2O3	Iron(III) oxide	FEIII2O3
Fe2SiO4	Diiron silicon tetraoxide	FEII2SIO4
Fe3O4	Triiron tetraoxide	MAGNETITE
FeO	Iron(II) oxide	FEIIO
FeO(OH)	Iron(III) oxide hydroxide	FEOOH
FeSiO3	Iron silicon trioxide	FEIISIO3
Gd2O3	Gadolinium oxide	GD2O3
Ho2O3	Holmium oxide	HO2O3
K2O	Potassium oxide	K2O
K2Si2O5	Dipotassium disilicon pentaoxide	K2SI2O5
K2SiO3	Dipotassium silicon trioxide	K2SIO3
KAl3(OH)6(SO4)2	Potassium trialuminum hexahydroxide sulfate	KAL3SULFAT
KAl3Si3O10(OH)2	Potassium trialuminum trisilicon decaoxide dihydroxide	MUSCOVITE
KAlSi3O8	Potassium aluminum trisilicon octaoxide	KALSI3O8
KAlSi3O8	Potassium aluminum trisilicon octaoxide	KFELDSPAR
KAlSi3O8	Potassium aluminum trisilicon octaoxide	MAXMIC
KAlSiO4	Potassium aluminum silicon tetraoxide	KALSIO4
La2O3	Lanthanum oxide	LA2O3
Lu2O3	Lutetium oxide	LU2O3
Mg2(OH)2CO3	Dimagnesium dihydroxide carbonate	MG2OH2CO3
Mg2(OH)2CO3.3H2O	Dimagnesium dihydroxide carbonate trihydrate	MG2OH2CO3.3H2O
Mg2Al3(AlSi5O18)	Dimagnesium tetraaluminum pentasilicon octadecaoxide	CORDIERIT

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
Mg2Al3(AlSi5O18)	Dimagnesium tetraluminum pentasilicon octadecaoxide	HYDCORD
Mg2Al3(AlSi5O18).1H2O	Dimagnesium tetraluminum pentasilicon dodecaoxide monohydrate	HYDCORD.1H2O
Mg2SiO4	Dimagnesium silicon tetraoxide	FORSTERITE
Mg2SiO4	Dimagnesium silicon tetraoxide	MG2SIO4
Mg3Al2Si3O12	Trimagnesium dialuminum trisilicon dodecaoxide	PYROPE
Mg3Si2O5(OH)4	Trimagnesium disilicon pentaoxide tetrahydroxide	CHRYSOTILE
Mg3Si2O5(OH)4	Trimagnesium disilicon pentaoxide tetrahydroxide	MG3SILICAT
Mg3Si4O10(OH)2	Trimagnesium tetrasilicon decaoxide dihydroxide	TALC
Mg4[Si6O15(OH)2(H2O)2].3H2O	Tetramagnesium hexasilicon pentadecaoxide dihydroxide pentahydrate	SEPIOLITE
Mg48Si35O85(OH)62	Octatetracontamagnesium pentatricontasilicon pentaoctacontaoxide 62hy	ANTIGORITE
Mg5(OH)2(CO3)4.4H2O	Pentamagnesium dihydroxide carbonate tetrahydrate	MAGNESITE
Mg5Al(AlSi3O10)(OH)8	Pentamagnesium dialuminum trisilicon decaoxide octahydroxide	CL7A
Mg5Al[AlSi3O10(OH)2](OH)6	Pentamagnesium dialuminum trisilicon decaoxide octahydroxide	CL14A
Mg7Si2O8(OH)2	Heptamagnesium disilicon octaoxide dihydroxide	MG7SILICAT
MgAl2O4	Magnesium dialuminum tetraoxide	MGAL2O4
MgFe2O4	Magnesium diiron teraoxide	MGFE2O4
MgO	Magnesium oxide	MGO
MgSiO3	Magnesium silicon trioxide	ENSTATITE
MgSiO3	Magnesium silicon trioxide	MGSIO3
Mn2SiO4	Dimanganese silicon tetraoxide	MN2SIO4
MnO	Manganese(II) oxide	MNO
MnSiO3	Manganese silicon trioxide	MNSIO3
Na2O	Disodium oxide	NA2O
Na2Si2O5	Disodium disilicon pentaoxide	NA2SI2O5
Na2SiO3.8H2O	Disodium silicon trioxide octahydrate	NA2SIO3.8H2O
Na4SiO4	Tetrasodium silicon tetraoxide	NA4SIO4
NaAl3Si3O10(OH)2	Sodium trialuminum trisilicon decaoxide dihydroxide	PARAGONITE
NaAlSi2O6	Sodium aluminum disilicon hexaoxide	NAALSI2O6
NaAlSi2O6	Sodium aluminum disilicon hexaoxide	NAALSIO32

Formula	Common/IUPAC Name	HYSYS OLI Interface Name
NaAlSi2O6.1H2O	Sodium aluminum disilicon hexaoxide monohydrate	NAALSI2O6.1H2O
NaAlSi3O8	Sodium aluminum trisilicon octaoxide	ALBITE
NaAlSi3O8	Sodium aluminum trisilicon octaoxide	HIGHALBITE
NaAlSi3O8	Sodium aluminum trisilicon octaoxide	LOWALBITE
NaAlSiO4	Sodium aluminum silicon tetraoxide	NAALSIO4
NaFe3(SO4)2(OH)6	Sodium triiron(III) hexahydroxide sulfate	NAJAROSITE
NaFeSi2O6	Sodium iron disilicon hexaoxide	AEGERINE
Nd2O3	Neodymium oxide	ND2O3
NiO	Nickel(II) oxide	NIO
Pb(OH)2	Lead(II) hydroxide	PBOH2
PbSiO3	Lead silicon trioxide	PBSIO3
PdO	Palladium(II) oxide	PDO
Pr2O3	Praseodymium oxide	PR2O3
SiO2	Silicon dioxide	ACRIST
SiO2	Silicon dioxide	CHALCEDONY
SiO2	Silicon dioxide	COESITE
SiO2	Silicon dioxide	QUARTZ
Sm2O3	Samarium oxide	SM2O3
SnO	Tin(II) oxide	SNO
SnO2	Tin(IV) oxide	SNO2
SnS	Tin(II) sulfide	SNS
SnS2	Tin(IV) disulfide	SNS2
Sr2SiO4	Strontium silicon tetraoxide	SR2SIO4
SrSiO3	Strontium silicon trioxide	SRSIO3
TiO2	Titanium(IV) oxide	RUTILE
USiO4	Uranium silicon tetraoxide	USIO4
Yb2O3	Ytterbium oxide	EYB2O3
Zn(OH)2	Zinc hydroxide	ZNOH2EPS
Zn2SiO4	Dizinc silicon tetraoxide	ZN2SIO4
ZnCl2.4Zn(OH)2	Pentazinc octahydroxide dichloride	ZN5CLOH
ZnCl2.4Zn(OH)2.1H2O	Pentazinc octahydroxide dichloride monohydrate	ZN5CLOH.1H2O
ZnO	Zinc oxide	ZNO
ZnO.FE2O3	Zinc diiron(III) tetraoxide	ZNFE2O4
ZnS	Zinc sulfide	WURTZITE
ZnSiO3	Zinc silicon trioxide	ZNSIO3
ZrSiO4	Zirconium silicon teraoxide	ZRSIO4

Index

T

V