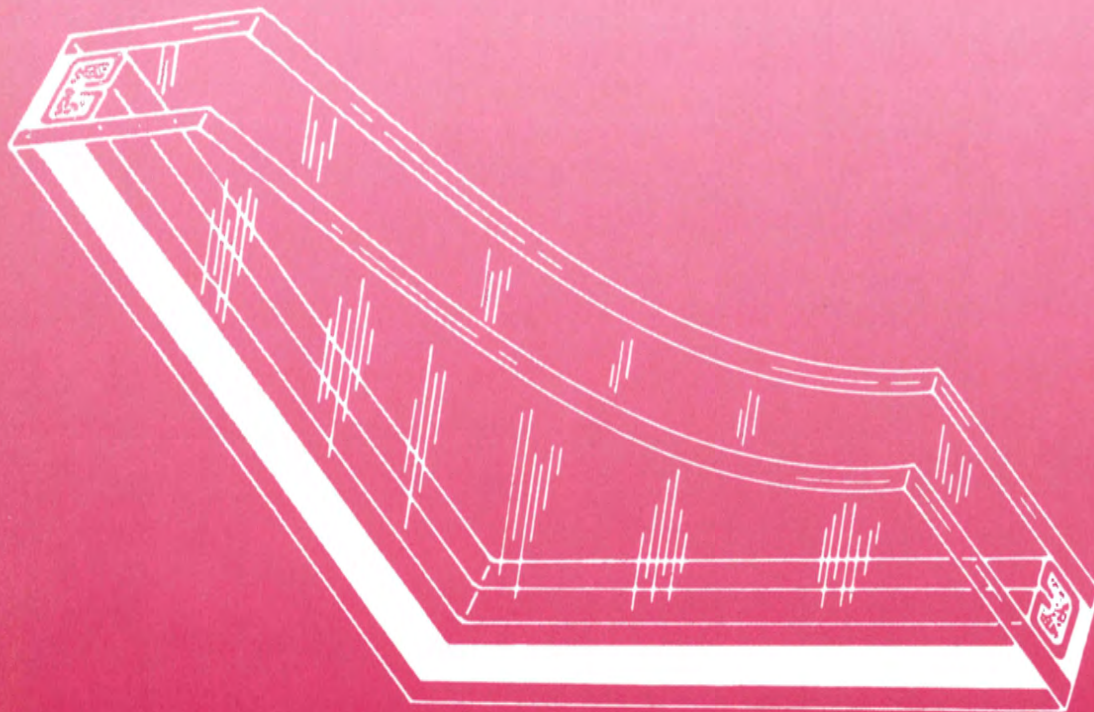


# CERTIFIED PRODUCTS DIRECTORY

SEALED INSULATING GLASS  
PHONE (315) 646-2234

FEBRUARY 2009



INSULATING GLASS

**IGCC**®

CERTIFICATION COUNCIL

CREDIBILITY IN INDUSTRY CERTIFICATION THROUGH ACTIVE PUBLIC PARTICIPATION

Visit Our Website @ [WWW.IGCC.ORG](http://WWW.IGCC.ORG)

**TABLE OF CONTENTS**

	<b>PAGE</b>
Program Concept -----	2
Board of Governors -----	3
Roster -----	4
Communications -----	7
Participants -----	7
Past IGCC® Presidents' Recognition -----	8
Meetings of the Certification Committee -----	9
Certified Products Key -----	10
Certified Products (Alphabetically By Plant) -----	11
Prototypes In Progress -----	38
Procedural Guide -----	39
IGCC® Label Requirements -----	44
Advertising Guidelines -----	45
Gas Content Initial & After Weathering Certification & Testing (GCIA) -----	47
Guidelines & Interpretations -----	48
Specifications Used -----	58
Participant's Agreement -----	59
License Agreement -----	60
IGCC® Approved Laboratories -----	64

IGCC® information and guidelines are included in the twice per year printing of the Certified Products Directory, or are available from IGCC® upon request. Re-printing of this information in any other manual, material or document without the written permission of IGCC® is in conflict with the desire of IGCC® and should not be interpreted as being endorsed by or affiliated with IGCC®.

## **PROGRAM CONCEPT**

Manufacturers of sealed insulating glass units, consumers, specifiers and others who are responsible for or concerned with the quality and performance of products purchased in the public interest, recognizing a need for a sound product testing and performance certification program, have jointly established the Insulating Glass Certification Council (IGCC®). All IGCC® meetings are open to the public and public participation is encouraged.

IGCC® is a non-profit organization which sponsors and directs a program of periodic accelerated laboratory testing and plant audits to ensure continuing product performance through specified standards. The testing specifications used are outlined in "ASTM Specification E2190 for Sealed Insulating Glass." It is the policy of IGCC® to remain flexible in referencing specifications and test methods in order to best reflect changing technology and new developments.

IGCC®'s responsibilities through its administrator are to see that periodic audits and independent laboratory tests are performed on participating manufacturers' products and to validate the right of that manufacturer to use the IGCC® label on his product or products information claims. Additionally, IGCC® requires licensees to have a working quality assurance program for the fabrication of insulating glass. Adherence is verified during twice per year plant visits. These requirements were adopted to improve the overall quality of IG units in the program, and also to satisfy requirements established by the Department of Housing and Urban Development, HUD.

Management and control of the program is vested in a Board of Governors made up equally of industry and public interest members. The public interest representatives are empowered with 50 percent of the voting power to ensure against undue industry influence of IGCC® action.

The program is under the supervision of a qualified administrator who is not affiliated with any manufacturer of insulating glass, material supplier, or participating testing laboratory, and is hired by and responsible to the Insulating Glass Certification Council. The manufacturers of the products listed herein have certified that the labeled materials comply with the performance characteristics established by ASTM E2190. The compliance of the manufacturers with the requirements of that specification is validated periodically by the IGCC® administrator through audits and testing by an independent testing laboratory under his direction.

Every manufacturer of insulating glass is eligible and encouraged to apply for the right to use the IGCC® label. However, permission to use the label is not granted until an independent laboratory test verifies compliance with the requirements. Once all requirements have been met, each product is assigned an IGCC® number to identify the product, performance class, and the factory in which it is made. Throughout the year, IGCC® requires the manufacturer to certify that the labels are being used only on units that are produced in the same manner and with the same materials as the tested specimens. Based upon these declarations, IGCC® authorizes continued use of the IGCC® label and the product listing published in this directory.

The Insulating Glass Certification Council wishes to recognize the substantial contributions made by the Safety Glazing Certification Council, the Sealed Insulating Glass Manufacturers Association (SIGMA) (now known as IGMA), American Society for Testing and Materials (ASTM), National Institute of Standards & Technology (NIST), FHA, HUD, Public Interest Persons, the Industry, and particularly consumers. Without input from such a broad cross-section, this program would not be possible.



## **IGCC® BOARD OF GOVERNORS**

### **REPRESENTING PUBLIC INTEREST**

Bruce Kaskel  
10 South LaSalle Street, Suite 2600  
Chicago, IL 60603  
Telephone: (312) 325-0915  
E-mail: [BKaskel@wje.com](mailto:BKaskel@wje.com)

Dennis K. Johnson  
Raths, Raths & Johnson  
835 Midway Drive  
Willowbrook, IL 60527-5549  
Telephone: (630) 325-6160  
Fax: (630) 325-2866  
E-mail: [dkjohnson@rrj.com](mailto:dkjohnson@rrj.com)

Elaine S. Rodman  
The Rodman Group, Inc.  
1100 Middle Road  
Glenshaw, PA 15116  
Telephone: (412) 486-6384  
Fax: (412) 486-6387  
E-mail: [rodman@verizon.net](mailto:rodman@verizon.net)

Brian Burnet  
706 Upland Heights  
Coldstream, BC V1B 2X9  
Telephone: (250) 503-2517  
E-mail: [jbbb@primus.ca](mailto:jbbb@primus.ca)

### **REPRESENTING INDUSTRY**

Ray Wakefield  
Trulite Industries, Ltd.  
1820 Courtney Park Drive  
Mississauga, ON L5T 1W1 Canada  
Telephone: (905) 670-7040  
Fax: (905) 670-7041  
E-mail: [ray@trulite.com](mailto:ray@trulite.com)

Mark Cody  
AGC Flat Glass North America  
PO Box 929  
Kingsport, TN 37662  
Telephone: (423) 229-7222  
E-mail: [mark.cody@agc-flatgl.com](mailto:mark.cody@agc-flatgl.com)

Jim Krahn  
Marvin Windows  
PO Box 100  
Warroad, MN 56763  
Telephone: (218) 386-1430  
Fax: (218) 386-4205  
E-mail: [jimkrahn@marvin.com](mailto:jimkrahn@marvin.com)

Bob Spindler  
Cardinal IG  
7201 West Lake Street  
Minneapolis, MN 55426  
Telephone: (952) 928-4612  
Fax: (952) 929-7229  
E-mail: [rspindler@cardinalcorp.com](mailto:rspindler@cardinalcorp.com)

Gerhard Reichert  
Glasslam Inc.  
1601 Blount Road  
Pompano Beach, FL 33069  
Telephone: (954) 975-3233  
Fax: (954) 975-3225  
E-Mail: [greichert@glasslam.com](mailto:greichert@glasslam.com)

### **IGCC® OFFICERS**

Ray Wakefield, President  
Jim Krahn, Vice President, Treasurer  
Elaine Rodman, Secretary

**IGCC® CERTIFICATION COMMITTEE**

Joe Erb, Chairman

Note: Board members are members of the Certification Committee by virtue of being a board member.

<u>Licensee</u>	<u>Primary Member</u>	<u>First Alternate</u>	<u>Second Alternate</u>
AGC Flat Glass North America	Mark B. Cody	Thomas Mewbourne	
Aiside Window Co-Midwest	Steve Harp	Lucas Pederson	
Arch Aluminum & Glass L.C.	Cliff Monroe		
Architectural Glass Products, LL	Sharon Gambill		
Architectural Window Mfg. Corp.	Greg Shaffer		
Architectural Windows & Doors	Ken Schnell		
Barracuda Manufacturing	Daniel Summers		
Berkowitz J. E., LP	Jim Stinsman		
Brin Northwestern Glass Co.	Stan Mariska	Doug Nelson	
Cardinal IG	Robert G. Spindler	Roger O'Shaughnessy	James Larsen
Classic Glass of Battle Creek Inc	Sharon VanNortwick		
Coastal Glass Distributors	Jim Coman		
Coral Industries Glass Division	Eric Fleming		
Crystal Window & Door Systems	Bob Zhu		
Custom Glass Prod. Of Carolina	Steven Reeder		
Custom Glass Products Inc.	Victor Reeder	Eric Reeder	Joseph Oboikovitz
Desert Glass Products	Jerome Ellis		
Dlubak Corporation	Chris Cotton		
DongGuang CSG Architectural	Yu Guanghue		
Dubuque Glass Company, Inc.	Tim Greenfiled		
Duo Seal Glass, LLC	Ron Bayer		
Eckelt Glas GmbH	Christian Eckelt		
EFCO Corporation	Mark Crane		
Emirates Glass L.L.C.	Jerry Dowling		
FAKRO GP Sp. Z.0.0.	Rafal Rynduch		
Flat Glass Distributors	Tom Hanley		
GGI Glass Distributors Corp.	Ron Vance		
Glass Dynamics	Michael Lankford	Conrad Lankford	
Glass Enterprises Inc.	Jean Yankanich		
Glass Professionals	Kevin Bauer		
Glaz-Tech Industries, Inc.	Jack Brown		
Glenny Glass Co.	Braxton Smith		
Global Security Glazing	Mark Johnson		
Goldray USA	Frankie Mauras		
Graham Architectural Products	Joel Gibson	Bruce Croak	
Guang Dong Golden Glass Tech	Wu Cong zhen		
Guardian Fabrication Inc.	Carrie L. Gillis	Kevin B. Olah	Daphinne Pedreschi
Impact Safe Glass Co.	Dalton Schreiber		
Insulite Glass Co., Inc.	Larry Vasholz		
Insulpane of Connecticut Ind	Jeff Wise		
Intigral	Mark Hutchinson	Mike Bayer	Susan Ordd

<u>Licensee</u>	<u>Primary Member</u>	<u>First Alternate</u>	<u>Second Alternate</u>
Jasan Glass - JSG	Kyungsoo Lee		
Jersey Tempered Glass, Inc	Mike Bouldin	John Latko	
Jiangmen Yamako Glass Co., Lt	Gary Cheng		
KML Windows, Inc.	Chris Parker		Gene Loubert
Louisville Plate Glass	Bill Stone		
Mannix Exterior Wall Systems, I	Jerry Esposito		
Marvin Windows	James Krahn	Douglas Steinbring	
Mid-American Glass, Inc.	Lou Magyar		
MLC Glass	Michele LoChirco		
Nashville Tempered Glass Corp.	Kevin Moore		
Northern Building Products, Inc.	Robert Pecorella		
Northwest Glass, Inc.	Ben Gillette		
Northwestern Inds, Inc.	Darrell Aldrich	Henry Heiss	Debbie Zimmer
NY Glass Products, Inc.	Jeffrey Newman		
ODL, Inc.	Chuck Pergler		
OKALUX GmbH	Harry Wirth		
Oldcastle Glass	Richard Wright	Robert Williams	
Oldcastle Glass CPG	Richard Wright	Robert Williams	
Patio Enclosures, Inc.	Kent Nusser	Craig Cox	
PDC Glass & Metal Services	Ken Lancaster		
Pennsylvania Insulating Glass	Timothy Wilkins		
PPG Glass	Ryan Nielsen		
Pioneer Windows	Tony Fab		
PPG Inds. Inc.	John Hidingier		
Rochester Insulated Glass Inc.	Stanley Wolk		
S N E Enterprises, Inc.	Steve Laszinski	Scott Brehm	Mark Brandner
Serious Materials, Inc.	Robert S. Clarke		
Shanghai Yaohua Pilkington Gla	Sun Dahai		
Shiang Yi Glass Co., Ltd	Jack Liao		
Shinn Fu Pair Glass Co.	Iduang Hsin Fu		
Sierra Pacific Windows	Rick Audsley		
SIGCO, Inc.	David McElhinny	Troy Johnson	
Solar Seal Co.	Frederic P. Shaw, Jr.		
Southern Wholesale Glass	Mark Michael		
Syracuse Glass Co., Inc.	John Dwyer		
Taiwan Glass USA Sales Corp.	Albert Wang		
Tecnoglass S.A.	Christian Daes		
Tempered Glass, Inc.	Doug Sampsel	Joel Wrenn	Matthew Sampsel
Thai-German Specialty Glass C	Zane Mercurio		
The Woodstone Company	Bonnie Thomas		
Thermoseal Industries	Richard Chubb	Larry Klick	
Thompson I.G. , LLC.	Heather Abbas		
Tianjin CSG Architectural Glass	Liu Zai Da		
Tower Glass Products Corp.	Barry Litt		

<u>Licensee</u>	<u>Primary Member</u>	<u>First Alternate</u>	<u>Second Alternate</u>
TRACO (Three Rivers Alum)-PA	Brad Fello		
Tri-Star Glass	Doug Vail		
Twin Pane Insul. Glass Co., Inc.	William Willett		
United Plate Glass Co., Inc.	Darin Vietmeier		
Vidrios Marte SA de CV	Hogo Hernandez		
Vinyl Window Designs Ltd.	Kaz Feret		
Vynylume Products	Jack Cappabianca		
Viracon Inc.	Brian Louks	Roger Skluzacek	Don Boutelle
Virginia Glass Products Corp.	Benjamin Beeler	Lloyd Brigman	
Vitro America, Inc.	Mike Grossman		
W. A. Wilson Inc.	Bob Hartong	Mark Bond	Jody Campbell
Weather Shield Mfg. Inc.	Steve Laszinski	Scott Brehm	Mark Brandner
West Coast Glass Products	Rusty Neubauer		
Western States Glass Corp.	Jon Witkin		
White Aluminum Enterprises L.L	Jabr Doshan		
Wholesale Glass Distributors, In	Kevin Boudreaux		
Winchester Industries	Micheal Sugrue		
Windsor Windows	David Hammond		
Wolverine Glass Products, Inc.	Mark McGann		
Xinyi Group (Glass) Co. Ltd.	Alfred Ngai		
YKK AP America	David Swan		
Z Global Glass & Trading Co.	Justina Hayden		
Zadra Vetri SPA	Cassisi Maurizio		
ZhongXin	Chuck Pergler		

## COMMUNICATIONS

In all matters concerning the administration and implementation of the IGCC® Certification Program, correspondence may be directed to any of the following:

IGCC ® Board of Governors  
Ray Wakefield, President  
Trulite Industries, Ltd.  
1820 Courtney Park Drive  
Mississauga, ON L5T 1W1  
Telephone: 905.670.7040  
Fax: 905.670.7041  
E-mail: ray@trulite.com

IGCC ® Certification Committee  
Joe Erb, Chairman  
Edgetech I.G., Inc.  
800 Cochran Avenue  
Cambridge, OH 43725  
Telephone: 740.439.2338  
Fax: 740.439.0120  
E-mail: jerb@edgetechig.com

Insulating Glass Certification Council  
John G. Kent, Administrative Manager  
Erin M. Ackley, Administrative Assistant  
PO Box 730, 100 West Main Street  
Sackets Harbor, NY 13685  
Telephone: 315.646.2234  
Fax: 315.646.2297  
E-mail: staff@amscert.com

Legal Counsel  
Leland J. Badger  
Howe & Hutton, Ltd.  
1901 Pennsylvania Ave., Suite 1007  
Washington, D.C. 20006  
Telephone: 202.466.7252 (ext. 101)  
Fax: 202.466.5829  
E-mail: ljb@howehutton.com

## PATICIPANTS (Suppliers)

Adco Products, Inc.  
4401 Page Avenue  
Michigan Center, MI 49254  
Telephone: 800.248.4010  
Fax: 517.764.6697  
Kathy Lamb

Allmetal Inc.  
636 Thomas Drive  
Bensenville, IL 60106  
Telephone: 630.250.8090  
Fax: 800.223.5224  
Dennis J. Raske, Jeff Andresen

Alumet Mfg., Inc.  
3803 136<sup>th</sup> Street  
Marysville, WA 98271  
Telephone: 360.653.6666  
Fax: 360.653.9884  
Larry Peterson

Atofina Chemicals, Inc.  
170 Canyon Road  
Moreland Hills, OH 44022  
Telephone: 440.893.9473  
Fax: 440.893.9474  
Larry Baum

Azon USA  
643 West Crosstown Parkway  
Kalamazoo, MI 49008  
Telephone: 260.433.7450  
Fax: 260.624.3475  
Michael Gainey

Bostik, Inc.  
200 Nolte Drive  
Paulsboro, NJ 08066  
Telephone: 856.848.8699  
Fax: 856.848.1646  
Terry Sammons

ChemSource  
7865 Quarterfield Road  
Severn, MD 21144  
Telephone: 410.969.3390  
Fax: 410.969.3391  
John Thomas

EdgeTech I.G., Inc.  
800 Cochran Avenue  
Cambridge, OH 43725  
Telephone: 740.439.2338  
Fax: 740.439.0121  
Joe Erb



FDR  
303 12<sup>th</sup> Avenue  
Buffalo, MN 55313  
Telephone: 763.682.6096  
Fax: 763.682.6197  
Randi Ernst

GE Sealants & Adhesives  
16325 Northcross Drive  
Huntersville, NC 28078  
Telephone: 847.724.0731  
Kenneth Anderson  
E-mail: kenneth.anderson@gesm.ge.com

Hygrade Metal Moulding Mfg. Corp.  
1990 Highland Avenue  
Bethlehem, PA 18020  
Telephone: 610.866.2441  
Doug Sherman, Vincent Pagano  
E-mail: dsherman@hygrademetal.com  
E-mail: vpagano@hygrademetal.com

PRC-DeSoto International, Inc.  
2820 Empire Avenue  
Burbank, CA 91504  
Telephone: 818.549.7530  
Fax: 818.549.7599  
Bruce Virnelson  
E-mail: bruce.virnelson@prc-desoto.com

TruSeal Technologies, Inc.  
6680 Parkland Blvd.  
Solon, OH 44139-4344  
Telephone: 216.910.1565  
Fax: 216.910.1507  
Tim Harris  
E-mail: harris@truseal.com

W.R. Grace & Company  
GRACE Division  
7500 Grace Drive  
Columbia, MD 21044  
Telephone: 410.531.4687  
Fax: 410.420.9115  
Stephen Meisel  
E-mail: Stephen.meisel@grace.com

## **PATICIPANTS (Non-Suppliers)**

Dr. Joseph E. Minor  
Consulting Engineer  
PO Box 603  
Rockport, TX 78381

Robert Schwartz  
Skidmore, Owings & Merrill  
103 Hooverton Place  
East Windsor, NJ 08520

David W. Bailey  
Bodycote Materials Testing Canada, Inc.  
2395 Speakman Drive  
Mississauga, Ontario, Canada L5K-1B3

Dan Braun  
Architectural Testing, Inc.  
130 Derry Court  
York, PA 17402

**IN RECOGNITION OF PAST PRESIDENTS WHO SERVED IGCC® SINCE ITS INCEPTION**

Roger D. O'Shaughnessy	Cardinal IG	1977-1979
Donald J. Vild	LOF Glass	1979-1981
Colin S. Brady	Twin Pane	1981-1982
Robert G. Spindler	PPG	1982-1983
Jerry Catalano	Hordis Brothers	1983-1985
Dr. Joseph Minor	University of Missouri	1985-1989
Mitchell D. Edwards	SPI Glass Corp.	1989-1992
John Colapietro	Tempglass, Inc.	1992-1993
Robert G. Spindler	Cardinal IG	1993-1996
James Krahn	Marvin Windows	1996-1999
Mark Cody	AFG Industries	1999-2002
Lyle N. Krohnberg	Viracon, Inc.	2002-2004
Mike Grossman	Vitro America, Inc.	2004-2007

**MEETINGS OF THE  
CERTIFICATION COMMITTEE**

The Certification Committee of the Insulating Glass Certification Council meets once every nine months. Interested persons may obtain minutes of this meeting and earlier meetings by writing to the Insulating Glass Certification Council.

By-laws are also available by writing to the Insulating Glass Certification Council.

Certification in this directory is up to date as of the date of issue; however, products may be authorized to use the permanent label or authorization removed from time to time. Please contact the IGCC® office for the latest up-to-date information.

Direct all requests or any comments to:

Insulating Glass Certification Council  
Mr. John G. Kent  
PO Box 730, 100 West Main Street  
Sackets Harbor, NY 13685

Telephone: 315-646-2234  
Fax: 315-646-2297  
E-mail: [staff@amscert.com](mailto:staff@amscert.com)

# CERTIFIED PRODUCT KEY

## Sealant:

HMB	=	Hot Melt Butyl
MPS	=	Modified Polysulfide
MPU	=	Modified Polyurethane
PB	=	Polyisobutylene
PS	=	Polysulfide
PU	=	Polyurethane
SI	=	Silicone
PUMS	=	Polyurethane Modified Silicone
RHMB	=	Reactive Hot Melt Butyl
EPU	=	Extrudable Polyurethane

## Construction Components:

K	=	Corner Key
J	=	Joiner
AP	=	Aperture Plug
ASM	=	Air Space Material (ex. Muntins)
CT	=	Capillary Tubes

## Construction Materials:

AA	=	Anodized Aluminum
MA	=	Mill Finish Aluminum
AL	=	Aluminum
GS	=	Galvanized Steel
SS	=	Stainless Steel
TS	=	Tinplate Steel
SM	=	Mill Finished Steel
CS	=	Chrome Coated Steel
SO	=	Steel Other (Painted, etc.)
ZS	=	Nickel/Zinc Plated Steel
DC	=	Die Cast
PL	=	Plastic

## Desiccant:

MS	=	Molecular Sieve
BL	=	Blended Desiccant
DM	=	Desiccated Matrix

## Thermal Break:

DP	=	Desiccated Plastic
PF	=	Plastic Foam
P	=	Plastic

## Spacer Systems - Generic:

BCS	=	Butyl Composite Spacer
BFS	=	Butyle Flexible Spacer
BPS	=	Butyl Polycarbonate Spacer
BSS	=	Butyl Sealant Spacer
FS	=	Foam Spacer
PCS	=	Polycarbonate Spacer
PHSS	=	Plastic Hybrid Stainless Steel
PSS	=	Polymer Spacer System
TBAA	=	Thermally Broken Anodized Aluminum
TBCS	=	Thermally Broken Chrome Steel
TBGS	=	Thermally Broken Galvanized Steel
TBTS	=	Thermally Broken Tin Steel
TP	=	Thermoplastic Spacer

## Substrate:

U	=	Uncoated
C3	=	Sputter Coated, Non-Edge Deleted (Soft)
C2	=	Sputter Coated, Edge Deleted (Soft)
C1	=	Pyrolytic Coated (Hard)
SCF	=	Suspended Coated Film

## Fabrication Techniques:

S	=	Soldered
W	=	Welded
B	=	Brazed
BC	=	Bent Corners (1, 2, 3, or 4)
MC	=	Mechanical Connector (1, 2, 3, or 4)

## Vapor Barrier:

AF	=	Aluminum Foil
B	=	Butyl
P	=	Plastic
MT	=	Mylar Tape

## Gas Content: Ref. Page 48

Gas Content	=	GCIA (measured value for initial content 90% or greater; after weathering, 80% or greater, under "new" program.
-------------	---	-----------------------------------------------------------------------------------------------------------------

Note: The materials of construction as listed above are presented as general information only. The designations for the various component parts are generic and do not reflect specific product modifications or technical differences within a component. For more detailed information on components, contact your insulating glass supplier.

UNDER EACH COMPANY'S NAME IS THEIR IGCC® PERMANENT LABEL

**IGCC CERTIFIED PRODUCTS - ALPHABETICAL BY PLANT**

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
AGC Flat Glass North America 1201 Hwy 67 E Alvarado, TX 76009 817-477-1144	1790 2407	BC4/PLJ BC4/PLJ	U/C2 U/C2	MA MA	BL BL	PB/SI PB/SI	
AGC 24 IGCC @ E2190 '09 AGC Flat Glass North America 3350 Ball St. Birmingham, AL 35224 205-841-6785	1871	BC4/PLJ/ASM	U/C2	AA	BL	PB/MPS	
AGC 03 IGCC @ E2190 '09 AGC Flat Glass North America 365 McClurg Road-Suite E Boardman, OH 44512 330-965-1100	1969 2374	BC3/MCI/AP/ASM BC3/MCI/ASM	U/C2 U/C1	TS BCS	DM BCS	HMB BCS	
AGC 61 IGCC @ E2190 '09 AGC Flat Glass North America 160 N. High Street Hebron, OH 43025-0220 740-929-2443	2371 2372	MC4/PLK/ASM MC4/PLK/ASM	U/C2 U/C2	MA MA	BL BL	PB/SI PB/PS	
AGC 15 IGCC @ E2190 '09 AGC Flat Glass North America 6600 Suemac Pl. Jacksonville, FL 32254-2792 904-786-6611	1447 1456	BC4/PLJ/ASM MC4/PLK/ASM	U/C2 U/C2	AA AA	MS BL	PB/MPS PB/SI	
AGC 02 IGCC @ E2190 '09 AGC Flat Glass North America 2522 Westcott Blvd. Knoxville, TN 37923 865-691-2040	2063 2220	BC4/GSJ/ASM BC4/GSJ/ASM	U/C2 U/C2	MA MA	MS MS	PB/PS PB/SI	
AGC 05 IGCC @ E2190 '09 AGC Flat Glass North America 3200 Austell Rd. Marietta, GA 30060 770-434-2041	2356 2357	MC4/PLK/ASM MC4/GSK/AP/ASM	U/C2 U/C2	AA AA	BL MS	PB PB/SI	GCIA GCIA
AGC 01 IGCC @ E2190 '09 AGC Flat Glass North America 1508 George Brown Drive Marshall, MI 49068 269-789-1267	1782 2359 2584	BC3/MCI/ASM BC3/MCI/ASM BC3/MCI/AP/SM	U/C2 U/C2 U/C2	FS BCS TS	FS BSS DM	HMB BSS HMB	
AGC 64 IGCC @ E2190 '09							

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
AGC Flat Glass North America 710 Landry Opelousas, LA 70570 337-948-7447	2341	BC4/MT	U/C2	MA	BL	PB/SI	
AGC 88 IGCC @ E2190 '09							
AGC Flat Glass North America 480 California Road Quakertown, PA 18951 215-538-9424	1784 2586	BC3/MC1/MT BC3/MC1/AP/ASM	U/C2 U/C2	FS TS	FS DM	PU HMB	
AGC 63 IGCC @ E2190 '09							
AGC Flat Glass North America 207 Watlington Industrial Rd. Reidsville, NC 27320 336-342-3878	2007 2420 2585	MC4/PLK/ASM BC3/MC1/ASM BC3/MC1/AP/ASM	U/C3 U/C3 U/C3	AA BCS TS	MS BSS DM	PB/PU BSS HMB	
AGC 62 IGCC @ E2190 '09							
AGC Flat Glass North America 6200 Gorman Rd. Richmond, VA 23231 804-222-0120	2099 2477	MC4/PLK/ASM MC4/PLK/ASM	U/C2 U/C2	MA MA	MS BL	PB/SI PB/PS	
AGC 10 IGCC @ E2190 '09							
AGC Flat Glass North America 3515 South 300 West Salt Lake City, UT 84115 801-268-2521	2448	MC4/PLK	U/C3	MA	BL	PB/PS	
AGC 19 IGCC @ E2190 '09							
AGC Flat Glass North America 5807 Business Park San Antonio, TX 78218 210-653-7790	2213 2355	BC3/MC1/SJ BC4/SJ	U/C1 U/C1	AA AA	BL BL	PB/MPS PB/SI	
AGC 26 IGCC @ E2190 '09							
AGC Flat Glass North America 803 Prestige Pkwy Scotia, NY 12302 518-374-3812	2473	BC4/SJ/ASM	U/C3	MA	BL	PB/PS	
AGC 09 IGCC @ E2190 '09							
Alside Window Co.-Northwest 19720 Bothell-Everett Highway Bothell, WA 98012 425-481-7101 Alside Bothell IGCC @ E2190 '09	2587 2588	BC3/MC1/MT/ASM BC3/MC1/ASM	U/C3 U/C3	FS TS	FS DM	HMB HMB	

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Alside Window Co-Midwest 3820 44th Ave. SW Cedar Rapids, IA 52401 319-390-4237	1133	BC3/MCI/ASM	U/C3	TS	DM	HMB	
AWCMW IGCC @ E2190 '09							
Alside Window Co-SE 3800 Farmgate Road Kinston, NC 28501 252-527-5050	1148 2068	BC3/MCI/ASM BC4/LC/ASM	U/C3 U/C3	TS FS	DM FS	HMB HMB	
AWCSE IGCC @ E2190 '09							
Alside Window Co-SW 7550 E. 30th St. Yuma, AZ 85365 928-344-6500	2070 2551	BC3/MCI/ASM BC3/MCI/MT/ASM	U/C1 U/C1	TS FS	DM FS	HMB HMB	
AWCSW IGCC @ E2190'09							
Arch Aluminum 5434 Farmers Market 1488 Magnolia, TX 77354 800-348-0282	1988	BC4/SSJ	U/C1	AA	MS	PB/MPS	
MAG W32 IGCC@IGMA@2009							
Arch Aluminum & Glass 13251 George Weber Drive Rogers, MN 55374 763-428-0019	2481 2482	BC4/GS/MT BC4/GS/MT	U/C3 U/C3	GS GS	MS MS	PB/MPS PB/SI	
ROG W39 IGCC@E2190 '09							
Arch Aluminum & Glass 8531 E. 44th Street Tulsa, OK 74145 918-665-6655	1960	BC4/ALJ	U/C2	AA	MS	MPU/HMB	
TUL W41 IGCC @ E2190 '09							
Arch Aluminum & Glass Co. 19430 East San Jose St. City of Industry, CA 91730 909-594-0235	1976 1977	MC4/GSK/ASM MC4/GSK	U/C2 U/C2	AA AA	MS MS	PB/MPS PB/SI	
COI W29 IGCC@IGMA@ 2009							
Arch Aluminum & Glass Co., Inc. 11950 E. 33rd Ave. Aurora, CO 80010 303-340-4290	1990 1991	MC4/GSK/ASM MC4/GSK/ASM	U/C2 U/C2	AA AA	MS MS	PB/SI PB/MPS	
ARA W31 IGCC@IGMA@2009							



<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Arch Aluminum & Glass L.C. 750 Cardinal Drive Bridgeport, NJ 08014 800-237-5148	1591	MC4/PLK	U/C2	AA	MS	PB/SI	
BPT W07 IGCC@IGMA® 2009							
Arch Aluminum & Glass L.C. 297 Ascot Parkway Cuyahoga Falls, OH 44223 330-923-3726	1756	BC4/TSJ	U/C1	MA	MS	PB/SI	
CUF W24 IGCC@IGMA® 2009							
Arch Aluminum & Glass L.C. 7701 W. New York St. Indianapolis, IN 46214 800-876-0646	1323 2002	MC4/GSK/ASM MC4/GSK/ASM	U/C2 U/C2	AA AA	MS MS	PB/MPS PB/SI	
IND W14 IGCC@IGMA® 2009							
Arch Aluminum & Glass L.C. 2030 N.W. Progress Parkway Jackson, MS 39213 800-815-5658	1883 2495	MC4/PLK MC4/PLK	U/C2 U/C2	AA AA	MS MS	PB/SI PB/SI	
JAC W22 IGCC@IGMA® 2009							
Arch Aluminum & Glass L.C. 41 Osage Avenue Kansas City, KS 66105 800-676-8199	1755 1972	BC4/GSJ/ASM BC4/GSJ/ASM	U/C2 U/C2	AA AA	MS MS	PB/MPS PB/SI	
KAN W15 IGCC@IGMA® 2009							
Arch Aluminum & Glass L.C. 5700 South Moreland Road New Berlin, WI 53155 800-242-2071	1468 1775 2471 2478	BC4/GSJ/ASM MC4/GSK/ASM BC4/PLJ/ASM MC4/PLK/ASM	U/C3 U/C3 U/C3 U/C3	MA MA TBSS TBSS	MS MS MS MS	PB/SI PB/MPS PB/SI PB/MPS	
NBR W23 IGCC@IGMA® 2009							
Arch Aluminum & Glass L.C. 3320-B Maggie Blvd. Orlando, FL 32811 800-367-7211	1821 1908	BC4/GSJ/ASM BC4/GSJ/ASM	U/C2 U/C2	AA AA	MS MS	PB/MPS PB/SI	
ORL W04 IGCC@IGMA® 2009							
Arch Aluminum & Glass L.C. 1825 S. 43rd Avenue Phoenix, AZ 85009 800-854-8022	1597 1598	MC4/GSK/ASM MC4/GSK/ASM	U/C2 U/C2	AA AA	MS MS	PB/SI PB/MPS	
PHX W30 IGCC@IGMA® 2009							

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Arch Aluminum & Glass L.C.	2329	MC4/GSK/ASM	U/C2	AA	MS	PB/MPS	
1655 South Avil Circle	2332	MC4/GSK/ASM	U/C2	AA	MS	PB/SI	
Salt Lake City, UT 84104							
801-656-1660							
SLC W34 IGCC@IGMA@ 2009							
Arch Aluminum & Glass L.C.	2254	MC4/GSK/ASM	U/C2	AA	MS	PB/MPS	
540 Industrial Court West	2255	MC4/GSK/ASM	U/C2	AA	MS	PB/SI	
Villa Rica, GA 30180							
800-241-7462							
VRA W08 IGCC@IGMA@ 2009							
Arch Aluminum & Glass L.C.	1485	MC4/PLK/ASM	U/C2	AA	MS	PB/MPS	
285 Northbrook Drive	1647	MC4/PLK/ASM	U/C2	AA	MS	PB/SI	
Youngsville, NC 27596							
919-435-3050							
YGV W20 IGCC@IGMA@ 2009							
Arch Tempered Glass Products	1749	MC4/GSK	U/C2	AA	MS	PB/SI	
4400 Cambridge Road	1750	BC4/GSJ	U/C2	AA	MS	PB/MPS	
Fort Worth, TX 76155							
800-571-4832							
DAL W35 IGCC @ E2190 '09							
Architectural Glass Products, LLC.	1664	BC3/MC1/PLK	U/C2	AA	BL	PB/PU	
6200 Maple Avenue							
St. Louis, MO 63130							
314-725-8088							
Architectural Glass Products, LLC IGCC @ E2190 '09							
Architectural Window Mfg. Corp.	1579	BC4/GSJ	U/C1	AA	MS	PB/SI	
359 Veterans Blvd.							
Rutherford, NJ 07070							
201-939-2200							
AWM IGCC @ E2190 '09							
Barracuda Manufacturing	2076	BC3/MC1/ASM	U/C3	FS	FS	HMB	
48230 West Rd.	2258	BC3/MC1/MT/ASM	U/C2	FS	FS	SI/SI	
Wixom, MI 48393							
248-624-5050							
Barracuda IGCC @ E2190 '09							
Berkowitz J. E., LP	1565	BC4/PLJ	U/C2	AA	MS	PB/SI	GCIA
One Gateway Boulevard	2317	MC4/PLK	U/C2	TBAA	MS	PB/SI	
Pedricktown, NJ 08067							
856-456-7800							
JEB IGCC @ E2190 '09							

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Brin Northwestern Glass Co. 2300 N. 2nd Street Minneapolis, MN 55411 612-529-9671	1580	BC4/SS/J/AF/ASM	U/C2	MA	MS	PB/PU	GCIA
BV IGCC @ E2190 '09							
Cardinal IG 4611 15th Ave N.W. Fargo, ND 58102 701-492-0920	1464 1492	BC4/MT/ASM BC4/ALJ/AF/ASM	U/C2/U U/C2	SS/SS AA/AA	MS/MS MS/MS	PB/SI PB/SI	GCIA GCIA
CIG-6 IGCC @ E2190 '09							
Cardinal IG 301 E. McSwain Drive Fremont, IN 46737 260-495-4105	1452 1453	BC4/GSJ/ASM BC4/ALJ/AF/ASM	U/C2/U U/C2/U	AA SS	MS MS	PB/SI PB/SI	GCIA GCIA
CIG-5 IGCC @ E2190 '09							
Cardinal IG Iowa 25 N. Greenfield, IA 50894 641-343-7113	1030	BC4/PLJ/ASM	U/C2	SS	MS	PB/SI	GCIA
CIG-2 IGCC @ E2190 '09							
Cardinal IG 3125 Neal Creek Mill Road Hood River, OR 97031 541-354-1280	1923 1924	BC4/ALJ/ASM BC4/PLJ/ASM	U/C2 U/C2	AA SS	MS MS	PB/SI PB/SI	GCIA GCIA
CIG-9 IGCC @ E2190 '09							
Cardinal IG 50 Elmwood Rd. Mountain Top, PA 18707 570-474-3109	2221 2222	BC4/ALJ/ASM BC4/PLJ/ASM	U/C2 U/C2	AA SS	MS MS	PB/SI PB/SI	GCIA GCIA
CIG-11 IGCC @ E2190 '09							
Cardinal IG 1011 E. Madison St. Spring Green, WI 53588 608-588-7415	1036 1306	BC4/PLJ/AF/ASM BC4/ALJ/AF/ASM	U/C2 U/C2	SS AA	MS MS	PB/SI PB/SI	GCIA GCIA
CIG-3 IGCC @ E2190 '09							
Cardinal IG 1620 Town Line Rd Tomah, WI 54660 608-372-3300	1039 1295	BC4/PLJ/AF/ASM BC4/ALJ/AF/ASM	U/C2 U/C2	SS AA	MS MS	PB/SI PB/SI	GCIA GCIA
CIG-4 IGCC @ E2190 '09							

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Cardinal IG	1970	BC4/PLJ/ASM	U/C2	SS	MS	PB/SI	GCIA
2132 Cardinal Park Drive Vinton, VA 21179 540-892-5600	1971	BC4/ALJ/ASM	U/C2	AA	MS	PB/SI	GCIA
CIG-10 IGCC @ E2190 '09							
Cardinal IG	1574	BC4/ALJ	U/C2	AA	MS	PB/SI	
201 Cardinal Road Waxahachie, TX 75165 972-937-4969	1718	BC4/PLJ	U/C2	SS	MS	PB/SI	GCIA
CIG-8 IGCC @ E2190 '09							
Classic Glass of Battle Creek Inc.	1004	BC4/GSJ/ASM	U/C1	AA	MS	PB/PS	
21472 M-37	1010	BC4/GSJ/ASM	U/C1	AA	MS	PB/SI	
Battle Creek, MI 49017 269-968-2791	2392	BC4/GSJ/ASM	U/C1	TBMA	MS	PB/PS	
Classic Glass IGCC @ E2190 '09							
Coastal Glass Distributors 7421 E. Spartan Blvd. Charleston, SC 29418-8462 843-552-6377	1366	BC3/MC1/MT/ASM	U/C2	FS	FS	HMB	
CGD IGCC @ E2190 '09							
Coral Industries 3010 Rice Mine Road Tuscaloosa, AL 35406 205-345-1013 Coral IGCC @ '09	2428	BC4/MT	U/C3	FS	FS	HMB	
Craftsman Fabricated Products							
4822 Southerland Houston, TX 77092 713-353-5800	1867	BC3/MC1/PLJ/AJ	U/C2	MA	MS	PB/PS	
CFP IGCC @ E2190 '09	1868	BC3/MC1/PLJ/AJ	U/C2	MA	MS	PB/SI	
Crystal Window & Door Systems, Ltd.							
31-10 Whitestone Expressway Flushing, NY 11354 718-961-7300	1732	BC3/MC1/ASM	U/C3	TS	DM	HMB	
CWDI IGCC @ E2190 '09							
Custom Glass Prod. Of Carolina 1475 Harrison Rd. Salisbury, NC 28144 704-633-4946	918	BC3/MC1/PLK/ASM	U/C2	AA	MS	PB/PU	
CGPC IGCC @ E2190 '09	2419	MC4/PLK	U/C2	AA	MS	PU	

LICENSEE	IGCC NUMBER	FRAME CONSTRUCTION	SUBSTRATE	SPACER	DESICCANT	SEALANT	GAS CONTENT*
Custom Glass Products Inc. 7515 Venture Circle Weston, WI 54476 715-359-2252	1964	MC4/PLK	U/C3	AA	MS	PB/SI	
CGP IGCC @ E2190 '09							
Desert Glass Products 4700 Engineers Way Suite 101 North Las Vegas, NV 89031 866-657-8090	1919 1920	MC4/PLK/ASM MC4/PLK	U/C2 U/C2	AA AA	BL BL	PB/MPS PB/SI	
Desert Glass IGCC @ E2190 '09							
Dlubak Corporation 520 Chestnut St. Blairsville, PA 15717 724-459-9540	1996	MC4/PLK	U/C1	AA	MS	PB/SI	
Dlubak IGCC @ E2190 '09							
DongGuang CSG Architectural Glass Co., Ltd. Xinji Village, Machong DongGuang City, GuangDong, China 86-755-27371028	1476	BC4/GSJ	U	AA	MS	HMB/PS	
CSG IGCC @ 1476 E2190 '09							
Dubuque Glass Company, Inc. 801 Cedar Cross Rd. Dubuque, IA 52003 563-582-5475	2263	BC3/MC1/PLK	U/C2	AA	MS	PB/RHMB	
DGC IGCC @ E2190 E2190 '09							
Duo Seal Glass, LLC 500 Nordhoff Place Englewood, NJ 07631 201-567-7902	2485 2486	MC4/PLK/ASM MC4/PLK/ASM	U/C1 U/C1	AA AA	MS MS	PB/PU PB/SI	
Duo Seal IGCC @ E2190 '09							
Eckelt Glas GmbH ResthofstraBe 18 Steyr, A4403 Austria 430-725-2894	2228 2229 2230	BC4/PLJ BC4/ALJ BC4/ALJ	U/C1 U/C1 U/C1	MA SS SS	MS MS MS	PB/PS PB/PS PB/SI	GCIA GCIA GCIA
Eckelt IGCC @ E2190 '09							
EFCO Corporation 1000 County Rd. & Bridle Ln. Monett, MO 65708 417-235-6011	2244	BC3/MC1/API/ASM	U/C2	TS	DM	MPU/HMB	
EFCO IGCC @ E2190 '09							

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Emirates Glass L.L.C.	2246	MC4/ALK	U/C1	MA	MS	PB/PU	
Al Quoz Indl. Area #4	2334	MC4/ALK	U/C1	MA	MS	PB/SI	
Dubai, United Arab Emirates 971-434-7151							
EmiratesIGCC @ E2190 '09							
FAKRO GP Sp. Z.0.0. ul. Wegierska 144A 33-300 Nowy Sacz, Poland 481-844-4035	2042	BC2/MC2/PLK	U/C2	AA	MS	PB/PU	GCIA
FAKRO IGCC @ E2190 '09							
Flat Glass Distributors 5355 Shawland Road Jacksonville, FL 32254 904-354-5413	2467	BC4/PLJ/ASM	U/C1	FS	FS	FS/HMB	
FGD IGCC @ E2190 '09							
GGI Glass Distributors Corp. 101 Venture Way Secaucus, NJ 07096 201-553-1850	1963	MC4/PLK/ASM	U/C1	AA	MS	PB/SI	
GGI IGCC @ E2190 '09							
Glass Dynamics 8901 220 Bypass Stoneville, NC 27048 336-573-2393	1925	BC4/SSJ/ASM	U/C2	MA	MS	PB/SI	GCIA
GDI IGCC @ E2190 '09							
Glass Enterprises Inc. 2277 New York Avenue Bensalem, PA 19020 215-638-1007	1436	BC4/SJ/ASM	U/C1	AA	MS	PB/PU	GCIA
Beta-Pane IGCC @ 1436 E2190 '09							
Glass Professionals 700 New York Avenue Des Moines, IA 50313 515-288-7427	1975	BC4/SS/ASM	U/C2	MA	MS	PB/MPS	
GP IGCC @ 1747 E2190 '09							
GlassFab Tempering Services Inc. 1448 Martiani Court Tracy, CA 95376 209-229-1060	2461	MC4/PLK	U/C2	AA	MS	PB/SI	
GlassFab IGCC @ E2190 '09							



<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Glaz Tech 8017 Edith Blvd. Albuquerque, NM 87113 505-898-1460 GTI Albuquerque IGCC® '09	1285	MC4/PLK	U/C1	MA	MS	PB/MP	
Glaz-Tech Industries 3702 Buckeye Pheonix, AZ 85009 866-624-3394 GTI Pheonix IGCC® '09	2331 2444	MC4/PLK/ASM MC4/PLK/ASM	U/C2 U/C2	AA AA	BL BL	PB/HMB PB/PS	
Glaz-Tech Industries 2191 South 300 West Salt Lake City, UT 84115 801-467-3136 GTI SLC IGCC® '09	2330	MC4/PLK/ASM	U/C2	AA	MS	PB/HMB	
Glaz-Tech Industries 150 Industrial Rd. Santa Teresa, NM 88008 505-589-4970 GTI Santa Teresa IGCC® '09	2340	MC4/PLK/ASM	U/C2	AA	MS	PB/PS	
Glenny Glass Co. 209 Castleberry Court Millford, OH 45150 800-535-2133 GLG IGCC ® E2190 '09	2427	MC4/PLK.ASM	U/C1	MA	MS	PB/PS	
Global Security Glazing 616 Selfield Road Selma, AL 36703 334-875-1900 Global IGCC ® E2190 '09	2003	MC4/PLK	U/C2	MA	MS	PB/SI	
Goldray USA 35 Kent Avenue Brooklyn, NY 11211 718-388-7667 Goldray IGCC® '09	2410	BC4/MT	U/C1	FS	FS	PB/SI	
Graham Architectural Products 1551 Mt. Rose Ave. York, PA 17405 717-849-8100 Graham IGCC ® E2190 '09	1428	BC4/SI/ASM	U/C2	AA	MS	PB/SI	

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Guang Dong Golden Glass Technologies Diejin Enterprise District Shantou College Road Shantou, Guang Dong, China GDGG IGCC@ '09	2386	BC4/GSJ	U/C2	MA	MS	PB/SI	
Guardian Fabrication Inc. 1412 S. First St. Rogers, AR 72756 479-636-0888 GRD-028 IGCC @ E2190 '09	2354	BC3/MC1/ASM	U/C2	BCS	MS	BCS	
Guardian Fabrication Inc. 5 Cudworth Road Webster, MA 01570 508-943-6600 GRD-062 IGCC @ E2190 '09	2312	BC2/MC2/PLK/ASM	U/C2	AA	MS	PB/SI	
Gulf Glass Industries, LLC 13th Industrial Area Sharjah, United Arab Emirates 971-653-8550 GGI IGCC @ 1710 E2190 '09	1710 2096	MC4/ALK MC4/ALK	U/C2 U/C2	MA MA	MS MS	PB/SI PB/PU	
Hankuk Haniso Co., Ltd. Processed Glass Sector 585-14 Gajwa Dong Incheon, 404-250 Korea Hankuk IGCC@ E2190 '09	2387	BC4/MT	U/C2	AA	MS	PB/SI	
Hartung Glass Industries 8211 Siena Avenue Sacramento, CA 95828 916-266-5700 HGI SAC IGCC@ 08	2327 2347	BC4/SJ/MT BC4/SJ/MT	U/C2 U/C2	MA MA	MS MS	PB/MPS PB/SI	G CIA G CIA
Hartung Glass Industries 173830 West Valley Highway Tukwila, WA 98188 800-552-2227 HGI TUK IGCC @ 08	2493 2494	MC4/PLK/ASM BC4/SJ/MT/ASM	U/C2 U/C2	MA MA	MS MS	PB/MPS PB/SI	G CIA G CIA
Harvey Industries, Inc. 30 Jack's Bridge Road Londonderry, NH 03503-2145 603-216-8300 HII-1 IGCC @ E2190 '09	1531 2205 2466	BC3/MC1/AP/ASM BC3/MC1/MT/ASM BC3/MC1/AP/ASM	U/C3 U/C2 U/C3/C3	TS FS TS/TS	DM FS DM	HMB BSS/PUMS HMB/PUMS	

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Harvey Industries, Inc. 7 Ledgewood Boulevard North Dartmouth, MA 02747 508-998-9779	1625	BC3/MC1/AP/ASM	U/C3	TS	DM	HMB	
HII-3 IGCC @ E2190 '09 Harvey Industries, Inc. 570 Cottage Road Springfield, MA 01104 413-788-0066	1533	BC4/AP/ASM	U/C3	TS	DM	HMB	
HII-4 IGCC @ E2190 '09 Hehr Glass Company 1021 Walnut Ave. Pomona, CA 91766 909-628-5557	1752 1796	MC4/PLK MC4/PLK	U/C1 U/C1	AA AA	BL BL	PB/SI PB/PU	
HEHR Glass 1752 IGCC @ '09 Hurd Windows and Doors, Inc. 1815 Water St. Merrill, WI 54452 715-536-5755	1815 1816 1818	MC4/PLK/ASM BC3/MC1/ASM BC4/GSJ/ASM	U/C2 U/C2 U/C2	AA TS SS	MS DM DM	PB/MPU MPU MPU	GCIA GCIA GCIA
HWDI IGCC @ E2190 '09 Impact Safe Glass Co. 2705 N. 35th Street Tampa, FL 36535 813-247-5528	1899	BC3/MC1/ASM	U/C2	BCS	BCS	BCS/HMB	
ISG IGCC @ E2190 '09 Insulite Glass Co., Inc. 780 W. Frontier Circle Olathe, KS 66063-0803 913-780-2233	1702 2008	BC3/MC1/GSJ/ASM BC4/GSJ/ASM	U/C2 U/C2	MA MA	MS MS	PB/SI PB/PS	
ISL IGCC @ 1702 E2190 '09, Insulpane of Connecticut Ind. 30 Edmond St. Hamden, CT 06517 203-865-8212	1966 2208	BC3/MC1/PLK/ASM MC4/PLK/ASM	U/C1 U/C1	AA AA	MS MS	PB/PS PB/HMB	
Insulpane CT IGCC @ E2190 '09 Intigral 6750 Vistoria East Austintown, OH 44515 330-793-7677 EST IGCC @ E2190 1200 '09	1200	BC3/MC1/AP/ASM	U/C3	TS	DM	HMB	GCIA

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Intigral 125 E. Steels Comers Rd Cuyahoga Falls, OH 44223 330-922-3944 EST 2026 IGCC @ E2190 '09	2026	BC3/MC1/AP/ASM	U/C2	TS	DM	HMB	GCIA
Intigral 6705 Wales Road Northwood, OH 43619 419-661-9395 EST IGCC @ E2190 '09	2238 2519	BC3/MC1/AP/ASM BC3/MC1/AP/ASM	U/C3/U U/C3	TS/TS TS	DM/DM DM	RHMB/HMB HMB	GCIA GCIA
Intigral 7850 Northfield Rd. Walton Hills, OH 44146 440-439-0980 EST IGCC @ E2190 '09	1268 1606 1724 1788 2037 2302	BC3/MC1/AP/ASM BC3/MC1/ASM BC3/MC1/AA/ASM BC3/MC1/AP/ASM BC3/MC1/ASM BC3/MC1/SSJ/ASM	U/C3 U/C3/U U/C3/U U/C3/U U/C3 U/C2/U	TS FS/FS TS/TS TS TS SS/SS	DM FS DM DM DM DM	HMB HMB RHMB/HMB PB/PU RHMB/HMB RHMB	GCIA GCIA GCIA GCIA GCIA GCIA
Jasan Glass - JSG 459-1 Neojo-Ri, Jori-Eup, Paju Gyeonggi, 413-821 South Korea 82-31-941-6289 Jasan Glass 2274/2275 IGCC@ '09	2274 2275	BC4/ALJ BC4/SSJ	U/C1 U/C2	MA SS	MS MS	PB/SI PB/SI	
Jersey Tempered Glass, Inc. 2035 Briggs Rd. Mt. Laurel, NJ 08054 856-273-8700 JTG IGCC @ E2190 '09	689 750	MC4/PLK/ASM MC4/PLK/ASM	U/C3 U/C1	AA AA	MS MS	PU/PU PB/PU	
Jiangmen Yamako Glass Co., Ltd. River Bank South Road Daze Town, Xinhui District Jiangment City, China 852-279-6886 JYG IGCC@ E2190'09	2273	BC3/MC1/ASM	U/C2	FS	FS	HMB/PU	
KML Windows, Inc. 23 Buchanan Court London, ON N5Z 4P9 Canada 519-681-7014 KML IGCC @ E2190'09	2373	BC4/MT/ASM	U/C1	FS	FS	RHMP	GCIA
Louisville Plate Glass 1401 W Broadway Louisville, KY 40201 502-584-6145 LPG IGCC @ E2190 '09	1281 1603	MC4/PLK MC4/PLK	U/C2 U/C2	AA AA	MS MS	PB/SI PB/MPS	

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
PPG Glass 27413 55th Avenue Langley, BC V4W 3Y1 Canada PPG IGCC@/IGMA@E2190 '09	2470	BC3/MCI/MT	U/C2	FS	FS	PB/SI	GCIA
Pioneer Windows 200 Union Avenue Johnstown, NY 12095 Pioneer IGCC @ E2190 '09	2072	MC4/PLK	U/C1	AA	MS	PB/HMB	
PPG Inds. Inc. 8150 Industrial Blvd., Suite 200 Breinigsville, PA 18031 610-336-4358 PPG Allentown IGCC@ '09	2297	BC3/MCI/SS/ASM	U/C3	TS	DM	PUMS	GCIA
Rochester Insulated Glass Inc. No. 73 Merrick Circle Manchester, NY 14504 585-289-3611 RIG 451 IGCC @ E2190 '09	451	BC4/PLJ	U/C2	AA	MS	PB/SI	
SNE Enterprises, Inc. 880 S. View Dr. Mosinee, WI 54455-0700 715-693-7000 SNE IGCC @ '09	1786 2510	BC3/MCI/ASM BC3/MCI/ASM	U/C2 U/C2	FS BPS	FS BPS	HMB BPS	
Serious Glass, Inc. 5400 Spine Road Boulder, CO 80301 303-530-1150 AGL IGCC @ E2190 '09	1939	BC2/MC2/PLK/ASM	U/SCF	TS/TS	MS	PB/PU	
Shanghai Yaohua Pilkington Glass Co., Ltd. - Shanghai SYPE 75 Kangliu Road, Pudong Shanghai, 201315 China 86-21-38108108 SYP 02 IGCC @ E2190 '09	2523 2524	BC4/GSJ BC4/GSJ	U/C2 U/C2	AA AA	MS MS	PB/SI PB/PS	
Shanghai Yaohua Pilkington Glass Co., Ltd. - Tianjin SYPE 1 Huatai Road, Hi-tech Industrial Park Beichen Tianjin, 300409 China 86-22-86880202 SYP 03 IGCC @ E2190 '09	2525 2526	BC4/GSJ BC4/GSJ	U/C2 U/C2	AA AA	MS MS	PB/SI PB/PS	

LICENSEE	IGCC NUMBER	FRAME CONSTRUCTION	SUBSTRATE	SPACER	DESICCANT	SEALANT	GAS CONTENT*
Shanghai Yaohua Pilkington Glass Co., Ltd.-Shanghai SYPB	1880	BC4/GSJ	U/C2	AA	MS	PB/SI	
611 Kangqiao Road, Pudong Shanghai, 201315 China	1881	BC4/GSJ	U/C2	AA	MS	PB/PS	
86-21-38108108 SYP 01 IGCC @ E2190 '09	2009	MC4/PLK	U	SS	MS	PB/PS	
Shiang Yi Glass Co., Ltd No. 2, Lane 176, Sec.1, ZhongXing Road Wugu Shiang, Taipei County 248 Taiwan, China 886-222-9919	1822	MC4/PLK	U	AA	MS	PB/SI	
SYG IGCC @ E2190 '09							
Shinn Fu Pair Glass Co. No. 1-1 Wen Ming 3 Street Kweishan, Taoyuan Taiwan, China 886-332-8322	1637	BC3/MC1/CT/ASM	U/C2	FS	FS	HMB	
SFP IGCC @ E2190 '09							
Sierra Pacific Windows 11605 Reading Road Red Bluff, CA 96080 530-527-9620	1444	MC4/PLK/ASM	U/C3	AA	MS	PB/SI	GCIA
SIGCO, Inc.	1741	MC4/PLK/ASM	U/C3	AA	MS	PB/MPS	GCIA
48 Spiller Drive Westbrook, ME 04092	2203	MC4/PLK/ASM	U/C3	AA	MS	PB/SI	
207-775-2676	2465	MC4/PLK	U/C3	TBAA	MS	PB/SI	
SIGCO IGCC @ E2190 '09							
Solar Seal Co. 55 Bristol Drive South Easton, MA 02375 508-238-0112	1079	BC4/PLJ/ASM	U/C2	AA	MS	PB/SI	GCIA
Solar Seal IGCC @ E2190 '09							
Southern Wholesale Glass 111 Industrial Blvd. Americus, GA 31719 229-928-5656	2360	BC3/MC1/MT/ASM	U	FS	FS	HMB/RHMB	
Southern Wholesale IGCC @ E2190 '09	2361	BC3/MC1/MT	U	BCS	BCS	BCS/RHMB	
Syracuse Glass Co., Inc. I General Motors Drive Syracuse, NY 13206 315-437-9971	2362	BC3/MC1/ASM	U	BCS	BCS	BCS	
SGC IGCC @ E2190 '09							
Southern Wholesale IGCC @ E2190 '09	823	BC4/GSJ/ASM	U/C2	AA	BL	PB/MPS	
Syracuse Glass Co., Inc.	828	BC4/GSJ/ASM	U/C2	AA	BL	PB/SI	
SGC IGCC @ E2190 '09							



<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Vynlume Products 3745 Hendricks Road Austintown, OH 44515 330-799-2000 VL IGCC @ E2190 '09	1928	BC3/MC1/ASM	U/C2	FS	FS	HMB	GCIA
Viracon Inc. 800 Park Drive Owatonna, MN 55060 507-451-9555 Viracon IGCC @ E2190 Owatonna, MN '09	980 1462 1911 2306	BC4/ALJ BC4/GSJ BC4/PLJ BC3/MC1/ALJ	U/C2 U/C2 U/C2 U/C2	AA MA SS MA	MS MS MS MS	PB/SI PB/SI PB/SI PB/SI	GCIA GCIA GCIA GCIA
Viracon Inc. 1586 East Venture Drive St. George, UT 84790 435-652-6400 Viracon IGCC @ E2190 St. George, UT '09	2363 2364 2552	BC4/GSJ BC4/SJ BC4/SJ	U/C2 U/C2 U/C2	MA AA SS	MS MS MS	PB/SI PB/SI PB/SI	
Viracon Inc. 8373 Zell Miller Parkway Statesboro, GA 30458 912-871-3500 Viracon IGCC @ E2190 Statesboro, GA '09	1529 1530	BC4/GSJ/AP BC4/GSJ/AP	U/C3 U/C3	MA AA	MS MS	PB/SI PB/SI	GCIA GCIA
Virginia Glass Products Corp. 347 Old Sand Rd. Ridgeway, VA 24148 800-368-3011 Virginia Glass Products Suresal IGCC @ E2190 '09	1810	BC4/MT	U/C1	TP	TP	TP/SI	GCIA
Vitro America, Inc. 12900 Nicholson Road Dallas, TX 75381-5547 972-484-3691 Vitro America IGCC @ 703-08	703	BC4/GSJ	U/C1	AA	MS	PB/SI	
Vitro America, Inc. 2710 Patterson Street Greensboro, NC 27407 800-729-3909 Vitro Greensboro IGCC @ E2190 '09	1761 2333	MC4/PLK/ASM MC4/PLK/ASM	U/C2 U/C2	AA AA	MS MS	PB/SI PB/MPS	
Vitro America, Inc. 3333 Holly Hall Houston, TX 77021 713-747-5430 Vitro Houston IGCC @ E2190 '09	2075	BC4/SSJ	U/C2	AA	MS	PB/SI	

LICENSEE	IGCC NUMBER	FRAME CONSTRUCTION	SUBSTRATE	SPACER	DESICCANT	SEALANT	GAS CONTENT*
Vitro America, Inc. 1513 North A St. Las Vegas, NV 89106 702-385-3095	2368 2369	MC4/PLK MC4/PLK/ASM	U/C2 U/C2	AA AA	MS MS	PB/SI PB/MPS	
Vitro Las Vegas IGCC @ E2190 '09							
Vitro America, Inc. 1875 Ord Way Oceanside, CA 92056 760-631-6643	2212 2239	MC4/GSK/ASM MC4/PLK/ASM	U/C2 U/C2	AA AA	MS MS	PB/MPS PB/SI	
Vitro Oceanside IGCC @ E2190 '09							
Vitro America, Inc. 9010 S. Norwalk Blvd. Santa Fe Springs, CA 90670 562-692-0395	2316	MC4/PLK	U/C1	AA	MS	PB/MPS	
Vitro America, Inc. 555 Zephyr Street, Bldg. A Stockton, CA 95206-4202 209-234-6172	2437 2442	MC4/PLK/ASM BC4/GSJ/ASM	U/C2 U/C2	AA MA	MS MS	PB/SI PB/SI	
Vitro SFS IGCC @ E2190 '09							
Vitro Stockton IGCC @ E2190 '09							
W. A. Wilson Inc. 6 Inds. Pk. Dr. Wheeling, WV 26003 304-232-2200	1695 1697	MC4/PLK/ASM MC4/PLK/ASM	U/C1 U/C1	AA AA	MS MS	PB/MPS PB/SI	
Starlite IGCC @ E2190 '09							
Weather Shield Mfg. Inc. 710 E. Division St. Greenwood, WI 54437 715-267-5031	2487	BC3/MCI/MT/ASM	U/C2	BPS	BPS	BPS	
WS G IGCC @ E2190 '09							
Weather Shield Mfg. Inc. Adams Avenue E. Ladysmith, WI 54848 715-748-2100	2490 2507	BC3/MCI/MT/ASM BC3/MCI/MT/ASM	U/C2 U/C2	BPS BPS	BPS BPS	BPS BPS	
WS L IGCC @ E2190 '09							
Weather Shield Mfg. Inc. 2990 S. 8th W. Logan, UT 84321 435-753-6590	2018 2489	BC3/MCI/MT/ASM BC3/MCI/MT/ASM	U/C2 U/C2	BCS BPS	BCS BPS	BCS BPS	
WS U IGCC @ E2190 '09							

LICENSEE	IGCC NUMBER	FRAME CONSTRUCTION	SUBSTRATE	SPACER	DESICCANT	SEALANT	GAS CONTENT*
Weather Shield Mfg. Inc.	2488	BC3/MCI/MT/ASM	U/C2	BPS	BPS	BPS	
One Weathershield Plaza Medford, WI 54451	2506	BC3/MCI/ASM	U/C2	FS	FS	RHMP	
715-748-2100							
WS Med IGCC @ E2190 '09							
Weather Shield Mfg. Inc.	2204	BC3/MCI/MT/ASM	U/C2	BPS	BPS	BPS	
400 Legacy Lane Park Falls, WI 54552							
715-762-3834							
WS P IGCC @ E2190 '09							
West Coast Glass Products	2383	MC4/PLK/ASM	U/C2	AA	MS	PB/PU	
17730 Crusader Avenue	2384	MC4/PLK/ASM	U/C2	AA	MS	PU	
Cerritos, CA 90703	2385	MC4/PLK/ASM	U/C2	SS	MS	PB/PU	
562-653-9797							
West Coast Glass IGCC@'09							
Western Reflections	17831	BC3/MCI/PLK	U/C2	AA	MS	MPS	
215 E. Roosevelt Ave.	18921	BC3/MCI/MT	U/C2	BCS	BCS	BCS	
Zeeland, MI 49464							
616-772-9111							
ODL IGCC @ E2190 '09							
Western States Glass Corp.	2310	MC4/PLK/ASM	U/C3	AA	MS	PB/SI	
43443 Osgood Road Fremont, CA 94538							
510-623-5000							
Western States Glass IGCC@'08							
White Aluminum	2335	BC4/ALJ	U/C2	AA	MS	HMB/SI	
PO Box 2402 Abu Dhabi, United Arab Emirates							
White Aluminum IGCC@'09							
Wholesale Glass Dist.	2279	BC4/SJ	U/C2	MA	MS	PB/SI	
1800 Transport Ave Memphis, TN 38116	2280	BC4/SJ	U/C2	MA	MS	PB/PS	
901-332-2200							
Wholesale Glass IGCC@'09							
Windsor Windows	2349	BC3/MCI/MT/ASM	U/C2	FS	FS	HMB	GCIA
2210 Stafford St. Ext. Monroe, NC 28110							
704-283-7459							
Windsor Windows NC IGCC@'09							
Windsor Windows	2285	BC3/MCI/MT/ASM	U/C2	FS	FS	HMB/N/A	GCIA
900 South 19th Street West Des Moines, IA 50265							
515-223-6660							
Windsor Windows IA IGCC@'09							

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS CONTENT*</u>
Wolverine Glass Products, Inc. 3119 Chicago Dr. S. W. Grandville, MI 49418 616-538-0100	2090	BC3/MCI/ASM	U/C1	BSS	BSS	BSS	
WGP-05 IGCC @ E2190 '09							
Xinyi Group (Glass) Co., Ltd. Xinyi Glass Industrial Zone Humen Town, Dongguan Guangdong, 52935 China 604-273-0813	2047 2350 2352 2353	MC4/PLK BC4/LC BC4/LC BC4/LC	U/C2 U/C2 U/C2 U/C2	SS MA TGI AA	MS MS MS MS	PB/SI PB/SI PB/SI PB/SI	GCIA GCIA GCIA GCIA
XYG IGCC @ E2190 '09							
YKK AP America 3340 Chestney Road Macon, GA 31217 678-838-6077	2455	BC4/BCS/ASM	U/C2	BCS	BCS	PB	
IGCC @ E2190 '04							
Z Global Glass & Trading Co. 207-15 Braid St. New Westminster, BC V3L 5N7 Canada 604-522-2131	2052	MC4/PLK	U/C2	AA	MS	PB/SI	
Z Global Glass IGCC @ 2052 E2190 '09							
Zadra Vetri SPA Via Tagliapietra, 33 Belluno, 32100 Italy 390-437-9346	1936 2299	MC4/PLK MC4/PLK	U/C2 U/C2	TBMA AA	MS MS	PB/SI PB/SI	
ZYS IGCC @ E2190 '09							
ZhongXin Meili Town Changshu City, 215500 China 616-748-5401	2055	MC4/PLK/ASM	U/C2	AA	MS	MPS/HMB	
ODL ZX IGCC @ E2190 '09							

**“PROTOTYPES IN PROGRESS”**

The following candidate Licensees have a prototype test in progress for possible inclusion in the IGCC® Program.

**MANUFACTURERS**

AAG – Al Abbar Glass	Dubai, UAE
AGC Flat Glass	Salt Lake City, UT
AGC Flat Glass	Boardman, OH
Albemarle Glass	Albemarle, NC
All Counties Glass	Stockton, CA
Alside Windows Co.	Akron, OH
Cardinal IG	Greenfield, IA
Cardinal IG	Hood River, OR
Cardinal IG	Spring Green, WI
Coral Industries Glas Division	Tuscaloosa, AL
Curved Glass Dist.	Derby, CT
Flat Glass Distributing	Jacksonville, FL
Glass Fab Tempering	Tracy, CA
Glaz-Tech Industries	Tucson, AZ
Hartung Glass	Tukwila, WA
Harvey Industries	North Dartmouth, MA
Insulated Glass of America	Dallas, NC
Intigral, Inc.	Walton Hills, OH
KML Windows	London, ON
Monarch Windows and Doors	Anniston, AL
Oldcastle Glass Calgary	Calgary, AB
Pennsylvania Insulating Glass	Lewistown, PA
PFG Glass	Langley, BC
PGT Industries	Salisbury, NC
Qinhuangdao High Tech Energy Glass	Qinhuangdao, China
Qinhuangdao Xinhua Glass	Qinhuangdao, China
Shenbo Special Architectural	Shenzhen, China
Silverline Windows and Doors	Fall River, MA
Silverline Windows and Doors	North Brunswick, NJ
SNE Enterprises	Mosinee, WI
Tecnoglass S.A.	Barranquilla, Columbia
Twin Pane Insulating Glass	Yaphank, NY
Western States Glass	Fremont, CA
White Aluminum LLC	Abu Dhabi, UAE
Zadra Vetri SPA	Belluno, Italy

NOTICE: In accordance with the terms of the IGCC® Procedural Guide, the IGCC® Standard License Agreement and Appendix A (Affidavit) thereto, a manufacturer with a prototype product test in progress is not authorized to use an IGCC® permanent label for that product or to certify that its product is in compliance with IGCC® Program Standards and Procedures until a passing prototype test report for that product is presented by the manufacturer to the IGCC® office and the manufacturer is otherwise in compliance with IGCC® Program Procedures.

## PROCEDURAL GUIDE

(IGCC Document II-10)

### INSULATING GLASS CERTIFICATION COUNCIL CERTIFICATION PROGRAM FOR SEALED INSULATING GLASS

---

#### **1.0 FOREWORD** (Modified 2/03)

Acceptance of certified sealed insulating glass comes with the conviction that such certification assures a high level of quality and the integrity of the identifying mark or certification label is being reliably maintained by a competent certifying agency.

The existing ASTM specification(s) for sealed insulating glass provides a sound technical basis for the required quality of sealed insulating glass. With the addition of independent administration plus periodic routine in-plant visits and product evaluation, a program of product certification is developed in accordance with accepted standards. The certification program described here is predicated upon the concept of independent and impartial administration of the certification procedures in the IGCC® license agreement.

To ensure administration of the certification program in a uniform and equitable manner, this procedural guide has been prepared for the information and guidance of the licensees.

It should be noted that the "IGCC® License Agreement" is the governing document for operation of the certification program. This procedural guide, which is not an extension of that document, serves merely to describe the administrative procedures and routine operation of the certification program.

The standards utilized in the IGCC® program for authorizing certification to, are as follows:

#### **ASTM E2190**

#### **2.0 GENERAL INFORMATION**

##### The Certification Concept

The IGCC® Certification Program is based upon the conviction that no standard of quality is good without the continuous adherence of the licensees to that standard. To buyers, specifiers, code officials and users, the IGCC® certification label offers the manufacturers assurance that his sealed insulating glass units have been produced in conformance to the ASTM specification(s).

##### Who Can Participate?

Every manufacturer of sealed insulating glass is eligible, on a voluntary basis, to participate.

##### Who Conducts the Program?

The Insulating Glass Certification Council, a non-profit corporation, is the sponsor of this certification program. IGCC® supervises the certification program under which the administrator periodically checks and reports compliance of the manufacturers of products having the IGCC® certification label.



### Administration

Administrative Management Systems, Inc. (AMS) is the independent administrator of the certification program. AMS maintains the IGCC® office of certification and handles the routine day-to-day business. All transactions are done in the name of IGCC®.

### How Can You Become a Licensee?

The following steps must be accomplished before IGCC® can authorize a manufacturer to use the IGCC® permanent label:

- a) The manufacturer must present a passing prototype report from an approved IGCC® testing laboratory (fabrication of which was witnessed by the administrator) to the IGCC® office.
- b) The manufacturer signs two copies of the IGCC® License Agreement and sends these to the IGCC® office. IGCC® will countersign both copies and return one to the licensee.
- c) Appendix A to the License Agreement, contains a description of the model (prototype report attached) that will be authorized to use the IGCC® permanent label.
- d) The licensee sends IGCC® the necessary certification fee.
- e) After receipt by IGCC® of the above, the administrator validates that particular model and sends to the licensee a "Notice of Authorization to Use the IGCC® Permanent Label." The permanent label must be affixed on each certified sealed insulating glass unit.
- f) The certified model will then be listed in the next published Certified Products Directory.

### **3.0 HOW THE CERTIFICATION PROGRAM WORKS** (Modified 7/04)

American Society for Testing and Materials has test methods and specifications for sealed insulating glass. Sealed insulating glass must meet or exceed the applicable specification before it can be certified.

IGCC® recognized independent testing laboratories conduct all tests. The IGCC® certification committee shall approve all laboratories, whose test reports are utilized by this certification program.

As the sole judge of compliance with the applicable specifications, the administrator authorizes a product, which has been approved to be listed in the Certified Products Directory.

Licensees label sealed insulating glass units in accordance with the labeling requirements established by the IGCC® Certification Committee.

Approved products are listed in the Certified Products Directory, which is published every six months. It is sent to door, sash and building manufacturers, glazing contractors, homebuilders, architects, regulatory agencies and code-making groups, etc. Directory listings contain the licensee's name, plant location and product description.

The administrator verifies production at the licensee's manufacturing location during twice per year audits. The prototype test will be considered as the test for the first year of certification. During the first year, two audits will take place at which time the inspector will compare current production with the product authorized to use the IGCC® permanent label. During the first audit in the second year, specimens will be fabricated for testing. IGCC® will ask the manufacturer to produce twelve test specimens. The fabrication of these twelve test specimens is witnessed by IGCC® and IGCC® verifies that they are produced in accordance with the construction certified. During test specimen fabrication, only the IGCC auditor and employees of the licensee being audited shall be present. The licensee is instructed to send these test specimens to an official IGCC® testing laboratory where they are tested. The specimens must be shipped to the laboratory within four weeks of fabrication. Tests are made at the laboratory recommended by the licensee and selected by the administrator from the approved list.

A monthly report listing the status of testing is mailed to the licensee by IGCC® on the 15<sup>th</sup> of each month. Upon completion of the test, the administrator mails results promptly to the licensee.

#### **4.0 COMPLIANCE SAFEGUARDS**

##### How is Compliance Assured?

Any certified product found in the course of routine audit and evaluation not to be in compliance with the model description is subject to having authorization to use the IGCC® permanent label removed. The licensee is sent a Request for Clarification giving thirty days in which to demonstrate to the satisfaction of the administrator that his product is in compliance with the model description that is certified. If he does not respond, a "Warning of Possible Removal of Authorization to Use the IGCC® Permanent Label" is sent by certified mail, return receipt requested, giving an additional thirty days to respond. If he does not respond, authorization to use the IGCC® permanent label is **automatically terminated** at the end of that thirty-day period.

In the case of a routine test failing to comply with the specifications, the licensee will be officially notified by certified mail, return receipt requested, that within 15 days he must respond by stating that a retest fabrication is requested and by paying all administrative and test fees. If there is no response within the 15 days, authorization to use the IGCC® permanent label is automatically terminated. If the retest option is accepted, the administrator will perform an audit and witness fabrication of the retest specimens within 45 days of payment of fees.

##### Challenging a Certified Product

Complaints of non-compliance from any corporation or business source will be investigated promptly by IGCC® upon receipt of the complaint in writing along with an appropriate surety deposit. A minimum surety deposit of \$1,500 will be required for each complaint of non-compliance. The surety deposit will be assessed at the rate of \$300 per man plus the reasonable cost of travel and other expenses entailed in resolving such incidents. Refunds of part or all of the surety deposit will be made when applicable. The surety deposit will cover all costs involved, unless the investigation proved non-compliance, in which case all costs will be borne by the licensee found to be in non-compliance.

##### Complaints by Consumers

The administrator shall receive and log the complaint; responding to the consumer with a Certified Products Directory and instructions on how to locate the IGCC® label.

It will be the consumer's responsibility to identify the label, number, class and date code which appear on the spacer of glass and advise the administrator of the same. Note: If no IGCC® label exists, the product has not been certified by the manufacturer to IGCC® and the administrator and IGCC® have no further responsibilities or options.

Once the consumer has identified the label, name, etc. and advised the administrator, the administrator shall respond, advising the consumer of the name, address, primary contact, model description and other pertinent information at hand as it pertains to the subject licensee. Note: If the complaint is being made for reasons of product appearance or failure such as glass quality, fogging, seal failure, dust, etc., the consumer shall be advised to contact the licensee for manufacturer directly. Some manufacturers and their dealers or distributors offer warranties on their products. Normal claims, procedures and legal remedies are available to consumers on a state-by-state basis.

If the consumer wishes to determine whether or not a labeled product is in compliance with the model described through an investigation by IGCC®, the corporation or business challenge procedure shall be utilized. The surety deposit shall be modified to \$400 and charges per man-day shall be assessed against the surety deposit in the amount of \$300 plus reasonable travel costs and other expenses.

#### Withdrawal of Certified Product

Any product which has been authorized to use the IGCC® permanent label may be voluntarily withdrawn from the Certification Program by the licensee at any time.

### **5.0 COSTS**

#### What Does the Program Cost?

The initial administration fee will be based on the date of authorization to use the IGCC® permanent label in a manner that participation in the Certification Program will be on a February 1 to January 31 basis thereafter. If the authorization date is between August 1 and December 1, 50% of the administration fee for the first year will be charged for participation and will include one audit prior to the following February 1 date. A licensee is invoiced for each item that is certified and listed separately in the Certified Products Directory. An additional invoice for testing laboratory fees will be issued upon fabrication of test units.

Testing of these units will not begin until payment has been received. Should failure of these units occur during certification testing, any remaining balance will be refunded to the licensee. (Modified 8/1/99)

### **6.0 DOCUMENTS AND AGREEMENTS**

#### License Agreement

This agreement, incorporating independent program administration and routine, periodic, independent plant audits, sampling and evaluation, governs the relationship between IGCC and the licensee.

Future amendments or revisions to the License Agreement will be recommended by the IGCC® Certification Committee and enacted by the IGCC® Board of Governors.

#### Effective Date, Duration, and Termination

The License Agreement becomes effective on the date of its execution, has an initial duration of twelve months (adjustable to a February 1 to January 31 basis), and is automatically renewed for successive twelve month periods, unless either party gives notice, at least sixty days prior to date of expiration, that cancellation is requested or unless revoked by IGCC® for causes set forth in the document.

#### Administrative Service Agreement

This agreement entered into by IGCC® and Administrative Management Systems, Inc. (AMS) governs the relationship between IGCC® and AMS, the independent administrator. In general, it provides that the administrator:

- a) routinely audits licensee manufacturing facilities twice per year, and during the first audit in the second and subsequent years, witnesses fabrication of specimens for testing at one of the IGCC® testing laboratories,
- b) has the right to witness any and all testing,
- c) reviews all test reports in order to determine compliance of the certified product with the specifications,
- d) audits and approves all test laboratory facilities for use in this certification program (test laboratories are recognized or approved by the IGCC® certification committee),
- e) publishes and mails the IGCC® Certified Products Directory twice each year and handles all routine clerical duties of IGCC® with respect to certification matters,
- f) acts as IGCC® treasurer, invoicing licensees, maintaining a bank account and dispersing funds (fiscal reports are made to the Board of Governors),
- g) attends all scheduled meetings of the IGCC® Certification Committee, and
- h) in all of its actions acts in the name of IGCC®.

#### Procedural Guide

This guide outlines program procedures in accordance with the provisions of the License Agreement and the Administrative Service Agreement, for the guidance of those concerned with the procedural details of the Certification Program's operation. It covers the steps to be taken in any given procedural situation in the interest of equitable and uniform treatment of licensees and the preservation of the integrity of the certification program.

#### Certified Products Directory

This directory is the one document and publication that is normally in the public's eye and contains a listing of the certified seal insulating glass units of each licensee.

### Certification Label

The licensee permanently affixes this certification mark to each unit of certified sealed insulating glass. This certification mark contains a code that refers to the listing in the Certified Products Directory. The listing then provides a product description including the company name, plant location, etc.

### **7.0 PROGRAM RESPONSIBILITY**

The IGCC® Board of Governors has overall responsibility for the well-being and acceptance of the Certification Program by the industry, building officials and the public. It also bears legal corporate responsibility.

The IGCC® Certification Committee has the responsibility for the general procedure and policy pertaining to operation of the Certification Program. As a part thereof, it

- a) establishes "guidelines",
- b) determines the applicability of the specifications in a specific situation where a question is raised by a licensee or the administrator,
- c) approves test laboratories,
- d) determines which of the specifications are to be designated effective for the purposes of product certification and the date or dates on which they become effective, and
- e) recommends to the IGCC® Board of Governors changes to be made in the License Agreement.

### **8.0 IGCC® LABEL REQUIREMENTS** (Modified 12/06/06)

THE IGCC® CERTIFICATION LABEL MUST BE PERMANENTLY MARKED ON A VISIBLE PORTION OF EACH SEALED INSULATING GLASS UNIT OR IT IS NOT CERTIFIED BY THE MANUFACTURER TO THE PUBLIC. The label shall be etched, sand blasted, embossed, printed, painted or otherwise permanently marked on the spacer or at least one component pane of the sealed unit.

This label must be visible after installation in the building. The IGCC® permanent label must be in block capital letters and have a minimum height of 0.050 inches. The letters IGCC® must be followed by the federal registration mark or a close facsimile, i.e., IGCC®. The IGCC® permanent label must contain the company identification (company name, trade name or company code), plant code\*, registered "IGCC®" mark and a date code spanning no more than a 12 month period, plus or minus three months. The date code should commence with the beginning of each calendar year (effective for both the beginning and the ending of each period). Outdated spacers may be hand stamped to bring the label up to date. The plant code will only be required when there is more than one plant with an IGCC® certified product operating under the same company name. As of the December 2006 IGCC Meeting, it is no longer required to include the standard reference on the label (E2190). The IGCC® permanent label must be affixed to certified products only at the time and place of manufacture. The labeling must be approved by the administrator. The

permanent label must be affixed only to the sealed insulating glass units of the licensee's own manufacture which have been certified by the manufacturer through IGCC®.

The permanent label must not be sold, transferred or otherwise disposed of in any manner other than being affixed to the licensee's certified production. The permanent label must not be affixed to any product from which certification has been withdrawn or which is produced with a process basically different from the one used when certification was obtained.

Example of Minimum Label:

**ABC Glass Co.(\*) IGCC® '08**

The IGCC® permanent label is listed under each company's name in the "Certified Products" section of this directory.

\* A plant code will only be required when there is more than one plant with an IGCC® certified product operating under the same company name.

## **9.0 ADVERTISING GUIDELINES**

The following concepts are important to remember whether you are a participant, licensee in the IGCC® Certification Program, or a supplier to the sealed insulating glass industry. This discussion is intended to provide you with an accurate background description of the IGCC® Certification Program, to help you avoid making possibly misleading, deceptive, or ambiguous statements regarding the program in the advertising of your products.

- 1) IGCC® is the sponsor of a certification program. IGCC® does not certify products.
- 2) The administrator audits laboratories and checks their equipment, audits licensees' production and fabrication of specimens, and validates test reports and certification claims.
- 3) Laboratories test specimens to specific test methods and specifications referenced by IGCC®
- 4) Manufacturers/licensees "certify" their products, affirming that their products are constructed similarly to specimens which were audited, tested and found to pass the stated criteria. A Licensee's Certification Statement is the imprinting, sandblasting, etching or other form of permanent marking of an IGCC® certification program designation and number to its product.
- 5) IGCC® does not have "members," inasmuch as the term "members" carries with it a connotation that some detailed criteria must be met in order to participate in the organization. Under the IGCC® concept, anyone can participate and "participants" simply must possess a "legitimate interest in the purposes of IGCC®." Manufacturers, on the other hand, which are "fabricators of sealed insulating glass units," become participants by virtue of executing a License Agreement with IGCC®. Any manufacturer of insulating glass may voluntarily enter into a License Agreement with IGCC®, provided that they intend to certify at least one product under the IGCC® Certification Program. Thus, the proper term to use for a manufacturer participant is "Licensee." A manufacturer, with a prototype in progress, is termed a "Candidate Licensee."

- 6) Unit specimens, not their components, are tested under the IGCC® program. Thus, if you are a supplier to the industry, statements indicating that your components have complied with the test methods would be incorrect. A better nomenclature for example, would be, that "Units tested to ASTM E2190 contained our X component have been found to meet the requirements of Class Y."
- 7) Should you have any questions concerning the IGCC® Certification Program, please contact:

Insulating Glass Certification Council  
Mr. John G. Kent  
PO Box 730  
Sackets Harbor, NY 13685  
Telephone: 315-646-2234  
Fax: 315-646-2297  
E-mail: staff@amscert.com

#### **10.0 QUALITY ASSURANCE PROGRAM** (Modified 8/06)

IGCC® requires licensees to have a working quality assurance program for the fabrication of insulating glass. IGCC® does not define the type or details of a program, simply that one must be in place. Adherence is verified during twice per year plant visits. These requirements were adopted to improve the overall quality of IG units in the program, and also to satisfy requirements established by the Department of Housing and Urban Development, HUD, and National Fenestration Rating Council (NFRC).

A licensee's QA program, as a minimum, must have the following elements:

- 1) A quality manual
- 2) A designated person responsible for quality assurance
- 3) Operating procedures documenting how IG units are fabricated (Process Control)
- 4) Routine product or component checks (Spacer, Desiccant, Sealant, Gas Fill, Finish Product)
- 5) Calibration
- 6) Non-Conforming Products and Corrective Action
- 7) Storage and Handling
- 8) Field Service
- 9) Internal Quality Audits
- 10) Training
- 11) Statistical Techniques

In order to establish equity with other international certification processes, IGCC will adopt the requirements of the IGMA TM-4000 document as minimum quality assurance requirements for IGCC license quality assurance systems. Additional information is available by contact IGCC or at [www.igcc.org](http://www.igcc.org).

**11.0 GAS CONTENT INITIAL AND AFTER WEATHERING CERTIFICATION AND TESTING (GCIA)**

(Modified 6/6/07)

A licensee must certify to seal durability requirements to participate in the gas content program. The program is intended to demonstrate a licensee's ability to initially fill to a minimum level and the ability of the construction of the IG unit to retain a minimum gas content level after exposure to the ASTM E2190 weathering cycle. Licensees meeting a tested initial gas content of 90% or greater and a final after weathering gas content of 80% or greater shall be identified in the Certified Products Directory (CPD) with the designation "GCIA" for "Gas Content, Initial and After Weathering". Both initial and after weathering gas content must be compliant in order to be listed as "GCIA". The gas content certification process will be as follows:

1. The normal twelve (12) 14x20-inch test units for seal durability, 14 for triple pane units, shall be fabricated under auditor witness during normal durability certification fabrication audits. All test units shall be gas filled with argon. All triple pane units shall have both cavities filled and tested. Per guideline G.19 as applicable, coated glass shall be used and triple pane units shall have coated glass as the center lite only. The test lab shall randomly select ten (10) units for initial gas content testing except that units containing air space material (i.e. grills or muntins) shall not be considered for testing. Units shall be inspected for any damage, and any damaged units not used. Testing for gas content after weathering shall be performed on the 6 weathering test units.
2. Four (4) additional production units shall be randomly selected by the auditor from inventory and shipped with the 14x20-inch test units. Production units shall be 3 to 20 square feet nominally. Production units must be targeted for 90% fill or greater to be eligible for selection. When testing triple pane units, dual pane units shall be acceptable for selection as production units. All four (4) production units shall be tested for initial gas content.
3. Units shall be tested for initial and after weathering gas content percent by non-destructive spark emission spectrography (SES) (procedures available on request). Up to two (2) test units (14" x 20") may be used to replace any unit broken in shipping or handling.
4. Laboratories shall report results of testing as "percent initial gas content" and "percent after weathering gas content" to the nearest whole percent.
5. The calculation of percent initial gas content of the ten (10) test units and the four (4) randomly selected production units shall be the average of all 14 units tested. The calculation of percent after weathering gas content shall be the average of all 6 weathered test units.
6. To be listed as complying with gas content certification, initial and after weathering (GCIA) the measured gas content level must be 90 percent or greater initially and



80% or greater after weathering. These levels were selected as levels that can reasonably be reached by insulating glass fabricators on a consistent basis. It takes into consideration a) variations that may occur in the filling process, and b) variations that may occur in the testing process. If a licensee feels that its gas content is consistently greater than these gas content values, the licensee can include this information in the licensee's literature.

7. It is recognized that actual production units (other than production units selected for this testing) may not necessarily be 90% or greater initial gas content but shall meet the manufacturer's stated initial content values.
8. Special arrangements need to be made if regulatory compliance is required for gas content other than argon (see certification guideline A.GC.1).

## **12.0 CERTIFICATION GUIDELINES AND INTERPRETATIONS**

For guidance in labeling and certifying sealed insulating glass units the IGCC® Certification Committee has adopted the following:

### **ALWAYS**

**12.1** The following situations permit the licensee to **always** certify the sealed insulating glass units with the same IGCC® number.

#### **12.1.1 GLASS**

A.GL.1

Any change in glass thickness from that tested. (Modified 3/15/06)

A.GL.2

Any change in glass tint or color from that tested (clear glass is required in test specimens).-

A.GL.3

Any change in glass size from that tested (14 by 20 inches is required for test specimens).

A.GL.4

Any change in glass type (i.e. tempered, heat strengthened, laminated or patterned glass) from that tested (annealed glass is normally used in all test specimens).

A.GL.5

Any change in glass shape from that tested (rectangular glass is required in test specimens). This guideline permits the same IGCC® number for triangular, circle head, trapezoidal and other shapes.

A.GL.6

Any change in glass supplier from that tested.

A.GL.7 (Deleted 3/15/06)

A.GL.8 (Deleted 3/15/06)

### **12.1.2 SPACER**

A.SP.1

Any change in air space dimension from that tested (one-quarter inch to one-half inch air space is allowed for testing).

A.SP.2

Any change in spacer wall thickness from that tested.

A.SP.3

Any change in spacer seam design (i.e. butt seam or lock seam) from that tested.

A.SP.4

Any change in supplier of spacer from that tested, everything remaining the same.

A.SP.5

Corners or connections which are soldered, welded, brazed or bent, but uncut, may be used interchangeably with the same IGCC® number. (Adopted 2/19/85)

A.SP.6

Corners or connections may be changed from mechanical connections (MS) to bent-uncut corners (BC), using the same IGCC® number utilizing joiners or corner keys of plastic, aluminum, stainless, or galvanized steel. (Adopted 10/18 /89, modified 5/14/08)

A.SP.7

Any change in spacer profile from that tested. (Adopted 7/29/04)

### **12.1.3 DESICCANT**

A.DE.1

A manufacturer may use the same certification number for units fabricated having air space equal to, or greater than 1/4-inch, provided the weight of desiccant per inch of perimeter edge remains the same or is greater than the model tested. On units fabricated having 3/16-inch air spaces, a manufacturer may use the same certification number, provided the manufacturer maintains the same weight of desiccant per inch of perimeter edge or as close to that value as possible. (Modified 7/28/99)

A.DE.2

A change in supplier of the same generic type of desiccant from that tested will not require a different IGCC® number.

A.DE.3

The use of the same desiccant manufactured in different particle size ranges will not require a different IGCC® number.

A.DE.4

An increase in the percentage of molecular sieve in a blended desiccant up to a maximum of 75% (defined as a "molecular sieve/silica gel" mix) will not require retest. Blends containing more than 75% molecular sieve shall be considered as molecular sieve desiccants and changes from these high sieve content blends (>75%) to 100% molecular sieve desiccants will not require retest. (Adopted 8/29/84, Modified 8/15/08)

A.DE.5

A licensee may change supplier of desiccant matrix provided that the licensee 1) immediately informs the administrator of the change, 2) provides written documentation that the adsorption capacity per perimeter edge of seal is equal to or greater than the matrix used in the original model, and 3) prepares test specimens at the time of the next scheduled inspection. (Adopted 4/29/97)

A.DE.6

Desiccant blends having more than 75% molecular sieve and less than 25% silica gel shall be considered as molecular sieve desiccants and fabricators may switch from the high molecular sieve content blends to 100% molecular sieve without retesting prior to their normal model certification test schedule. (Adopted 5/14/08)

**12.1.4 SEALANT**

A.SE.1

Any increase in moisture vapor transmission path length is an acceptable alternate for labeling.

A.SE.2

A licensee may use a temporary alternate sealant in the same generic class by a) notifying the administrator of the change, b) having test specimens witnessed by the administrator's representative at the next regular audit, and c) sending the test specimens to an approved testing laboratory within four weeks of the test specimens' fabrication date. The licensee may temporarily use the certification label on a provisional basis commencing with written notification of the administrator and end when test results are received by the administrator. (Modified 6/7/90)

**12.1.5 GAS CONTENT**

A.GC.1

Any change in gas from that tested providing the same gas filling process is used; argon is required for testing.

**NEVER**

**12.2** The following situations never permit the licensee to certify with the same IGCC® number. They require the use of a different IGCC® number.

### **12.2.1 SPACER**

#### N.SP.1

A change in spacer material, i.e. aluminum to steel or any other material will require a different IGCC® number.

#### N.SP.2

A change in spacer surface finish, i.e. anodized to mill finish or hot dip to electro galvanized will require a different IGCC® number.

#### N.SP.3

A change in corner design from soldered, welded, braised or bent(BC) to mechanical corner(MC) will require a different IGCC® number. (Modified 5/14/08)

#### N.SP.4

A change in corner key material to another material, except to the same material as the spacer, will require a different IGCC® number. All plastic keys and joiners are considered generically equivalent. This guideline does not apply to A.SP.6. (Modified 5/14/08)

#### N.SP.5

If bent, uncut spacer corners or connections(BC) are changed to mechanically fastened spacer corners(MC); a new IGCC® number is required. (Adopted 2/19/85, Modified 5/14/08)

### **12.2.2 DESICCANT**

#### N.DE.1

A change in generic type of desiccant will require a different IGCC® number. Generic types, for purpose of this guideline are molecular sieve, and blends of silica gel and molecular sieve up to 75% by weight molecular sieve. Blends containing more than 75% molecular sieve shall be classified as a molecular sieve generic type of desiccant. (Adopted 8/29/84, Modified 8/14/08)

### **12.2.3 SEALANT**

#### N.SE.1

In a single sealant system, a change in generic type of sealant will require a different IGCC® number.

#### N.SE.2

In a two sealant system, a change in generic type of primary sealant will require a different IGCC® number.

#### N.SE.3

In a two sealant system, a change in generic type of secondary sealant will require a different IGCC® number.

#### N.SE.4

Any decrease in the minimum design moisture vapor transmission path length will require a different IGCC® number.

N.SE.5

Any increase in thickness of design moisture vapor transmission path (glass to spacer dimension) will require a different IGCC® number.

**GENERAL**

**12.3 CLASS I - UNIT MODIFICATION**

**DEFINITIONS**

Breather Tube - Tube inserted into the I.G. spacer and intended to be sealed prior to glazing of the unit.

Capillary Tube - Tube inserted into the I.G. spacer and intended to be left permanently open.

Capillary Tube and How It Is Related to Membrane - IGCC® observes that organically sealed insulating glass units are not actually hermetically sealed, but rather are composed of sealing systems which demonstrate sufficiently low water and gas transmission rates as to pass the accelerated weathering conditions imposed in ASTM standard(s). We acknowledge that certain capillary tube designs may also control the passage of water and gases in such a manner as to allow breathing but still demonstrate the ability to pass the test conditions.

G.0 - (Added Guideline – 8/14/85)

An I.G. construction incorporating a permanently open capillary tube will be considered and listed as equivalent to a previously IGCC® program certified I.G. model without a capillary tube, provided the following applies:

- a. Material and construction of the units are identical, except for the inclusion of the capillary tubes.
- b. Both sets of I.G. units reach the same performance level when tested according to ASTM standard(s). The units with capillary tubes need only be tested once.
- c. The test must be run by an IGCC® approved lab.
- d. Preparation of test specimens need not be witnessed. However, the test result must be reviewed and approved by the administrator.

G.1 Breather Tube (Temporarily Open Type)

A licensee is permitted to insert the open end of a breather tube in a bag or container of desiccant during shipment of a specimen to the test laboratory. The breather tube must be sealed prior to testing. (Adopted 8/14/85)

G.2 Breather Tube (Temporarily Open Type)

The addition of a breather tube is acceptable, for shipping only, even though not in the test specimen. The breather tube should be properly sealed before installation. (Adopted 8/14/85)

### G.3 Edge Protection

The addition of edge protection such as metal banding, metallic foil, barrier coat, etc., is acceptable with the same IGCC® number.

### G.8 Air Space Material

A minimum of two (2) of the twelve (12) test specimens shall be constructed utilizing all of the components of an air space material system, which are used in the ultimate product. Such systems may include but are not limited to blinds, films, decorative glass inserts, grills and muntins. When testing muntins or grills, test samples shall be fabricated dividing the sample into nine equal areas (3 by 3). A licensee may use the same certification number for units manufactured without air space material providing the yearly testing has been accomplished in accordance with the above procedure. (Modified 7/29/04)

### G. 15 Multiple Air Spaces

Multiple air space units may be certified with the same certification number as single air space units, provided that the construction of each space complies with the guidelines for single space units; pressure communication of spaces is permitted, but not required. This guideline shall apply to multiple air space products that use glass or a suspended coated film (SCF) as an airspace barrier. For all new certified products and currently certified products after 1/1/09 testing of multiple air space units shall be performed initially and in lieu of single air space unit testing at least once each (4) years. (Modified 5/14/08)

### G. 19 Coated Glass

An Insulating glass unit constructed with coated glass with the coating toward the air space (pyrolytic or sputter coated) shall be certified utilizing the same certification number provided annual test units include one lite of the coated product per test sample. Only the highest volume coated product need be tested. Testing of sputter coated non-edge deleted will cover sputter coated edge deleted, Pyrolytic and uncoated (clear). Testing of sputter coated edge deleted will cover Pyrolytic and uncoated. Testing of Pyrolytic will cover Pyrolytic and uncoated. Testing uncoated (clear) will only cover uncoated (clear). (Modified 3/15/06)

### G.26 Desiccant in 1/2-inch Air-Space Test Units

In cases where units are made for testing with 1/2-inch air-space, glass thickness shall remain within the guidelines already established and that the desiccant quantity shall be limited to a maximum of filling one-half of the perimeter. (Adopted 8/28/86) However, if equivalent desiccant quantity to a standard 1/4-inch air space unit can be demonstrated, filling of all sides will be allowed. (Modified 9/1/87)

It should be noted that the limitation upon desiccant quantity is done in order to maintain the relationship of quantity of desiccant within the 1/2-inch air space test unit identical with that of a 1/4-inch air space test unit since the moisture vapor transmission area in each of these units is identical. Filling 4 spacers of a 1/2-inch air space would give manufacturers having this larger air-space unit tested an unfair advantage. It was asked to point out that testing of units containing a 1/2-inch air space will undergo greater stress during the test and, therefore, is considered a more difficult test in this configuration. (Adopted 8/28/86)

**G.27 Structural Modification, i.e. Hole for Gas Fill**

A sealed insulating glass unit that has been structurally modified, i.e. hole or holes for gas filling, shall be tested annually for certification assembled with standard production procedures including these modifications. At the option of the manufacturer, the units may be tested with gas or air in the interspace. Non-gas-filled units shall be considered equivalent providing construction is identical except for the omission of the gas filling hole/holes. To accommodate this modification a nominal 1/2 inch  $\pm$  1/16 inch gas or air space maybe tested under this guideline. (Modified 7/31/01)

**G.29 IG Integrated Sash Technology**

When testing units using IG Integrated Sash Technology, IG fabricators would have the option of testing integrated IG units in one of two methods: 1) glass size shall be 14x20-inch and the sash shall be cut away to fit in a 14x20-inch testing opening, or 2) a larger sash which accommodates 14x20-inch glass may be tested. This option would need to be reviewed with the test lab ahead of time to ensure the test chamber can accommodate the larger sash size. All testing is completed with no glazing beads and all fabrication holes or simulated hole punches in place. If the sash is cut away, this function must be performed by the IG fabricator.

**G.30 Applied Coatings to an IG Spacer and Spacer Components**

An insulating glass unit utilizing an applied coating to an IG spacer and spacer components shall be initially certified under the normal certification testing process. The application of the coating will be documented in the product audit report. A coating may be added to or removed from an already certified product utilizing the same certification number by applying guideline G.5. Applied coatings would include, but not be limited to paints, coatings and adhesion promoters. (Adopted 5/14/08)

**12.4 CLASS II - SPECIMEN**

**G.6 Specimens – Quantity (Modified 8/23/07)**

No more than 4 additional test units (excluding production units for gas content test) shall be labeled by the auditor for testing (12 units required for double pane and 14 units required for triple pane.) When gas content testing (GCIA), ship the additional auditor “labeled” units to the testing laboratory.

**G.9 Specimens - Production**

When a licensee is producing only unlabeled units at the time of a plant audit, the licensee will be requested by the IGCC® inspector to label at least one unit in accordance with Guideline G.7 to permit completion of the audit. (The label may be hand scribed or crayon marked on the inside surface.)

**G.10 Specimens - Production**

If a licensee is not producing units at the time of an audit a labeled unit from inventory may be cut apart for inspection, provided that the date code is within the audit period.

**G.11 Specimens - Production**

A portion of the audit will be used to determine whether a licensee is using the IGCC® label on unauthorized units.

#### G.12 Specimens - Shipment

Units fabricated for test during an audit must be shipped directly to the approved test facility within four weeks of the date of fabrication. If they are not, the audit may be considered invalid and another audit must take place. But for normal in plant quality inspection processes performed by the manufacturer, there shall be no 'pre-testing' of any test sample being forwarded to the approved test facility. In situations where fabricated test units are deemed unacceptable for test by the licensee as a result of a normal plant quality inspection process, the licensee shall be allowed to re-fabricate test samples only once. This re-fabrication must occur within 45 days of the original fabrication. All costs related to this guideline are to be borne by the licensee. (Modified 5/14/08)

#### G.14 Specimen Frequency

The prototype test will be considered as the test for the first year of certification (providing application is made within 18 months from the date of the test report). This is effective for matters initiated after May 1982. The next fabrication for testing purposes will be in the first half of the second year.

#### G.31 Suspension of Testing

There may be situations where the program participant wishes to suspend testing (gas or durability) before completion. For prototype fabrications this shall be at the discretion of the program participant and has no effect on the certification listing. For certified unit testing, with consideration for guideline G.12, and suspension of the test, gas or durability, shall be deemed as a failure of that portion of the test. G.12 would not be applicable once testing has started. (Adopted 5/14/08)

### **12.5 CLASS III - EQUIVALENCY**

#### G.5 Gray Area

Situations that are not included in the "Always" or "Never" categories listed above, fall into the gray area. The gray area situation is covered by Minutes item 10.10.77.10 and is repeated here.

When there is a change and the licensee desires to use the same IGCC® number, the licensee shall immediately notify the administrator with all details of the change and also satisfy either 1 or 2 below:

- 1) establish equivalency by passing the same level of ASTM test as certified to by:
  - a) having specimens tested at an IGCC® independent testing laboratory or
  - b) having specimens tested at an in house (licensee) facility, testing done in house by a licensee must be done under the surveillance of the administrator.

Specimens must be fabricated and submitted to the laboratory within two weeks after notification of the administrator. During the test period, the licensee may temporarily use the certification label on a provisional basis or:

- 2) demonstrate the equivalency of the change to the satisfaction of the Certification Committee or a subcommittee. (Specimens not required.)



#### G.21 Transfer

If a licensee manufactures the same model using the same technology at a different location, a certification number with a temporary status will be issued provided that testing (durability and/or gas content) of the model is initiated at the next scheduled testing audit. This guideline may not be applied to products for which certification has been previously removed due to test failure. (Modified 12/06/06)

#### G.23 Equivalency

A licensee needs to establish equivalency for a model only once.

#### G.24 Vision Glass Areas

Special note should be taken that the ASTM E2190 test method only provides testing for "Vision glass areas." As such, it is only these types of units that fall within the IGCC® Certification Program. This, however, in no way precludes the ultimate use of these units in other applications, e.g. Spandrel units.

(Adopted 8/28/86) Labeled spacer may be used in IG units, other than vision glass, but in that case, certification does not apply. (Adopted 4/16/91)

#### G.28 Certifying Additional Constructions

A current licensee with currently certified products may certify additional constructions or replace a certified construction at the same plant location by having specimens tested at an IGCC® independent testing laboratory. These samples need not be witnessed by an IGCC® representative. Upon completion of passing test results the construction shall be eligible for IGCC® certification. IGCC® witnessed testing must occur at the next regular audit. (Adopted 7/28/99)

### **12.6 CLASS IV - APPEALS, REVIEW AND DE-CERTIFICATION**

#### G.13 Monetary

The administrator shall remove authorization to use the IGCC® permanent label from all of any licensee's products for failure to pay monies due to IGCC® within 60 days of invoice date (reference License Agreement A. 13 and B.6).

#### G.16 Appeals

In cases where a routine test fails to comply with the specifications:

- 1) Upon notification of failure of routine test samples to reach the certified level, the licensee will be officially notified by certified mail, return receipt requested. Within 15 days the licensee must respond to the certified letter stating a retest fabrication is requested by paying all required administrative and test fees. If there is no response within 15 days, authorization to use the IGCC® permanent label will be removed.

If the retest option is accepted:

- a) Request for retest option is granted by IGCC® only upon receipt in full of any administrative and retest fees within 15 days of date of mailing of the notification of failure.

- b) IGCC® will perform an audit and witness fabrication of retest specimens within 45 days of payment of fees in 1) above.
  - c) Licensee must ship and deliver retest specimens to the testing laboratory within 7 days of fabrication. (Copy of shipping papers and delivery receipt must be received by IGCC® within 14 days of fabrication of retest specimens.)
- 2) There is to be no change in certification status during the retest period. All routine audits will continue. Sample fabrication for subsequent routine testing of the questionable model will be suspended pending the outcome of the retest.
  - 3) If the retest units comply, they shall be considered as the next routine test.
  - 4) If the retest units fail, the licensee is issued a cease and desist order on use of the label immediately.
  - 5) The licensee may choose to accept certification at any level passed by the retest, although it might be a lower level than originally desired.

#### G.20 Authorization to use the IGCC® Permanent Label

Authorization to use the IGCC® permanent label will be removed if a routine audit discloses that a licensee is labeling units containing the same unauthorized construction for the third time.

#### G.22 Clarification of Due Process Appeal Process

Clarification of due process appeal process under License Agreement, Paragraph A.11:

A Licensee's appeal from a final adverse decision by the Administrator, under License Agreement Paragraph A.11, shall in the first instance be to the Certification Appeals Subcommittee of the Certification Committee, which acts as an executive committee for the Certification Committee in order to provide a prompt hearing for the Licensee and to act on the Licensee's appeal as quickly as possible. A decision by the Certification Appeals Subcommittee favorable to the Licensee shall be a final decision. A decision by the Certification Appeals Subcommittee adverse to the Licensee may be appealed to the full Certification Committee for a due process review and hearing. Such an appeal to the Certification Committee must be made in writing within 30 days of an adverse decision by the Certification Appeals Subcommittee and this appeal will be heard at the next regularly scheduled meeting of the Certification Committee. Pending a hearing by the Certification Committee on such an appeal, the Licensee may maintain certification for the product at issue.

**SPECIFICATION USED FOR SEALED INSULATING GLASS**

- **ASTM E2188**
- **ASTM E2189**
- **ASTM E2190**

Specification may be obtained by contacting:

ASTM  
100 Barr Harbor Drive  
West Conshohocken, PA 19428-2959  
Telephone: (610) 832-9585  
Web Address: [www.astm.org](http://www.astm.org)

Adopted: May 13, 1977

**PARTICIPANT'S AGREEMENT**

I have read the PURPOSES of the INSULATING GLASS CERTIFICATION COUNCIL and hereby declare that I have a legitimate interest in the goals of the Council. I further declare that I do not manufacture insulating glass units nor am I employed by any company, which is in such manufacturing business; as such I do not qualify to become a Licensee of the Insulating Glass Certification Council.

In view of the above declaration, I wish to be recognized at a "participant" in the Insulating Glass Certification Council.

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

My interest in the Council is: \_\_\_\_\_

Signature: \_\_\_\_\_

**ARTICLE II**

**SECTION I - PURPOSES**

The purposes of the Insulating Glass Certification Council shall be:

1. Promote public benefit by encouraging maintenance of the highest standards of excellence in the manufacture of insulating glass.
2. To encourage and cooperate in developing standards related to performance characteristics of insulating glass products.
3. To plan, organize, direct, coordinate and sponsor a certification program for insulating glass manufacturers to assure that their products meet applicable standards and/or performance requirements, adopted or approved by the Council.

**ANNUAL FEE**

The annual fee for a non-manufacturing participant will be \$350.00 per company.

There will be no fee for public interest or consumer participants.

**CREDIBILITY IN CERTIFICATION THROUGH ACTIVE PUBLIC PARTICIPATION**

February 2009

**INSULATING GLASS CERTIFICATION COUNCIL, INC. ("IGCC" ®)  
CERTIFICATION PROGRAM FOR SEALED INSULATING GLASS UNITS  
STANDARD LICENSE AGREEMENT (as revised effective 3/15/06, and constituting the successor  
effective agreement, pursuant to the terms herein, for all preceding fully-executed IGCC®  
Certification Program standard license agreements)**

This Agreement, made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_, by and between INSULATING GLASS CERTIFICATION COUNCIL, INC., an Illinois not-for-profit tax-exempt corporation having its administrative office at P.O. Box 730, Sackets Harbor, NY 13685 hereinafter called "LICENSOR" and \_\_\_\_\_ having its principal office at \_\_\_\_\_ hereinafter called "LICENSEE", hereby provides as follows:

**WITNESSETH:**

1. WHEREAS, Licensor is sponsoring a Certification Program for Insulating Glass Units, which will provide for (1) the validation of a manufacturer's certification of such products by means of independent laboratory testing to the requirements of applicable Specification(s) and applicable Test Method(s), and ASTM Standards; and under the further terms and conditions of the Certification Program set forth in this Agreement and the Program's Procedural Guide, and also providing for (2) the stipulation by each such manufacturer that the manufacturer maintains a quality assurance program which covers the production of all the units to which above clause (1) refers; and  
2. WHEREAS, The responsibilities of IGCC®, the IGCC® Administrator and the independent laboratories are limited to the tasks set forth in this Certification Program; they do not endorse, warrant, or guarantee products validated or certified thereunder, and  
3. WHEREAS, Licensor is willing to accept participation in said Certification Program by all manufacturers of Insulating Glass Units under the terms set forth herein; and  
4. WHEREAS, Licensor is the uncontested sole owner of the mark and label "IGCC"®; the aforesaid mark/label, and/or other mark(s)/label(s) cross-licensed to Licensor, is/are hereby licensed by Licensor to Licensee and said label(s)/mark(s) shall be permitted to appear on Licensee's registered Certification Program labels which are permitted by Licensor to be affixed to the Insulating Glass Units complying with the pertinent requirements of the Certification Program; and  
5. WHEREAS, the Licensor shall contract for the complete administration of the Program and the Administrator shall contract for services with the independent laboratories which meet the ethical, financial, and business experience standards of the American Council of Independent Laboratories or National Society of Professional Engineers for performance of tests and other administrative duties as are herein provided; and  
6. WHEREAS, the Licensor shall appoint a "Certification Committee" comprised of representatives of IGCC® Certification Program Participant manufacturer licensees, including the Public Interest members of the IGCC® Board of Governors, and Participant Suppliers and Test Laboratories, and other Participant organizations and persons (including public interest representatives of said organizations), acting as a liaison between Licensor, Licensees and interested parties: meetings of this committee shall be called by the Chairman of the Certification Committee at least once each year; and  
7. WHEREAS, the procedural guide, to be developed in accordance with paragraph B.4 shall be adhered to both by the Licensor and the Licensee; and

8. WHEREAS, the Administrator shall conduct all aspects of the program in accordance with the highest nationally recognized standards for conduct of such a program including HUD standards for accreditation of the Program and the Administrator as set forth in HUD's "Use of Materials Bulletin No. 82" ("HUD Building Product Standards and Certification Program for Sealed Insulating Glass Units"), which requires an accredited Program to include a quality assurance provision such that all participating manufacturers shall have quality assurance programs covering the production of the units to which Whereas Clause No. 1 above refers; and

9. WHEREAS, Licensee is willing to participate in and support said Program under the terms and conditions set forth in the Agreement.

Therefore, be it

RESOLVED, that it is agreed by and between the parties hereto as follows:

**LICENSEE:**

A.1) Shall sign this Agreement by providing the signature of its corporate officer or authorized representative, and also its primary IGCC® Engineering or Quality Dept. Contact, where noted herein.

A.2) Shall allow the Administrator's representative, without prior notice, free access at any time during regular business hours, to Licensee's place of manufacture of Insulating Glass Units certified hereunder and to witness the manufacture of samples which are to be tested for compliance with the requirements. Licensee's refusal to permit access for inspection purposes hereunder may be due cause for removal of its entire product listing from the Certification Directory and the withdrawal of its rights to affix Certification Labels thereto. Acceptable reasons for not permitting entrance for inspections would include strikes, acts of God, and circumstances beyond immediate control of the manufacturer. Areas which may have been set aside for research or prototype development may be restricted. It is understood that the Administrator or his representative shall be allowed to pick up samples from the field for inspection or testing. It is understood that periodic tests each year will be made on each model to be certified and that said tests will be made at the laboratory selected by the Administrator or Licensee from the approved list. Results of each test shall be promptly mailed to the IGCC® Administrator. IGCC® will notify the Licensee of compliance or non-compliance. It is further understood that routine expense of sampling and testing will be borne by the Licensee. The Licensor will charge each Licensee accordingly and so contract with the Administrator. The Administrator will contract for testing with approved testing

laboratories. Expenses for packaging, shipping, and purchasing of glass for testing will also be borne by the Licensee. These costs will be handled directly between the Administrator and each Licensee.

A.3) Shall affix to each of its certified products the permanent Certification Label, number and class assigned by the Licensor:

- a) Only at the time and place of manufacture; and
- b) Only to Insulating Glass Units of Licensee's own manufacture, which have been so approved by the Licensor.

A.4) Shall not sell, transfer or otherwise dispose of Certification Labels in any manner other than affixing to Licensee's certified production.

A.5) Shall not affix hereafter the IGCC® or other registered mark, or Participant's Certification Label registered with Licensor, to any product from which certification has been withdrawn or which is produced with a process basically different from the one used when certification was obtained. A model change shall be as defined by the IGCC® Certification Committee.

A.6) Shall upon a finding by the Licensor that a certified product of Licensee has been changed as defined by the Certification Committee have thirty (30) days in which to submit a request for waiver of retest or request a new inspection and retest at Licensee's expense if no waiver is granted. Failure of Licensee to act as required immediately above shall constitute due cause for exclusion of this product from the program.

A.7) May withdraw a certified product from the Program by written declaration and request for removal of said product from the Licensor's listing signed by the authorized representative of the Licensee.

A.8) Shall use all practical means at its command continuously to assure that its products hereunder certified fully comply with the Specification requirements, and are manufactured in the same manner as test specimens, and are subject to a quality assurance program maintained by Licensee, and Licensee shall so stipulate to the Administrator's representatives during the periodic visits of said representatives to Licensee's facilities described above in Section A.2) or when otherwise requested by the Administrator.

A.9) Shall refrain from using terms implying or claiming certification, validation, accreditation, or the like in connection with advertising referring to products which have not been validated, or from which validation of certification claim has been withheld or withdrawn or any other statement or term which might be interpreted as compliance with this program.

A.10) In connection with the advertising of model systems which the Licensor has approved and granted a certification number or label, the Licensee must use the following concepts as guidelines: Licensor (IGCC®) sponsors the Certification Program. Licensee (Manufacturer) certifies that the product is the same as the model which has been tested. Administrator validates the test results through Inspections according to the Licensor's guidelines.

A.11) Shall abide by the decision of the Administrator as to the compliance or non-compliance of Licensee's products with the requirements of the IGCC® Certification Program, determined in accordance with the requirements of the specification testing of such products. It is understood that the Administrator shall be the sole judge of compliance or non-compliance with the Specifications applicable to the IGCC®@ Certification Program, for purposes of Licensor's validation of Licensee's certification of such a product under this Program. Where questions involving interpretation arise, the matter will be referred to the IGCC® Certification Committee for ruling.

A.12) Agrees that notice regarding the status of any of its certified products shall be carried in the Certification Directory.

A.13) Shall pay the participation fees shown in the Schedule of Fees, which is an APPENDIX hereof, upon signing of this

Agreement and at each annual renewal thereof. It is understood, that this Schedule of Fees may be changed from time to time by the Licensor.

A.14) Agrees that the Administrator may, at his discretion, use any and all data, exclusive of Licensee's Company name, address, proprietary product designation or any other information which may provide clues as to the manufacture of the products, for the purpose of comparing test methods and correlating test methods with field performance.

A.15) Shall legibly and permanently mark each piece of its certified product in accordance with the marking requirements of the applicable standards and, in addition, include a symbol identifying the plant in which the product was made to comply with the standard for the purpose of identification under this Certification Program.

A.16) Shall furnish Licensor with any information regarding its product as may be necessary to properly identify Licensee's Certified Product for listing in Licensor's Certification Directory.

A.17) Shall regularly mail to the Administrator, at the same time as such material is furnished others, copies of its catalogs and other literature, excluding price and discount information, where such materials list Licensee's products certified hereunder.

A.18) Shall abide by and comply with all procedural details which the Administrator may prescribe for the implementation of the Certification Program, provided that such procedural details are not inconsistent with the provisions and purposes of this License Agreement.

A.19) Shall have the right, at its option, to designate a nominee from Licensee's organization for consideration by the Board of Governors for appointment to the Certification Committee.

LICENSOR:

B.1) Shall prepare and publish at least twice each year, with such interim supplements as may be desirable, a Certification Directory containing a listing of the Certified Insulating Glass Products which have been found by test to be in compliance with each required specification for each Licensee then in good standing with Licensor. This directory shall include the Licensee's assigned certification number, name, location and product certification status.

B.2) Shall promptly mail substantial quantities of each Directory and supplement to door, sash, and building products manufacturers, glazing contractors, home builders, architects, regulatory agencies and code-making groups, and publicize the Directory to trade publications.

B.3) Shall provide and maintain a list of approved laboratories qualified to perform tests required hereunder and to authorize tests herewith specified. Said list of approved laboratories is to be developed by the Certification Committee.

B.4) Shall prepare and maintain a procedural guide and the standard forms which may be adopted for use with the Licensee and the approved laboratories in connection with the operation of the Certification Program.

B.5) Shall hold all test reports and correspondence with Licensees and others, relating to Licensee's products or tests, in strict confidence, except for communication necessary to effect proper listing in the Certification Directory.

B.6) Shall not list in or remove from the Certification Directory any product or Licensee except on due notification from the Administrator to do so, except as provided in Paragraph A.7 above or because Licensee fails to pay applicable fees as provided in A.13 above.

B.7) Shall enter into a contract with an independent agency, whereby this independent agency will act as Administrator of the Certification Program for and on behalf of Licensor, to provide and authorize all sampling and testing, review and approve test

data, perform periodic evaluations or other duties and functions herein provided for.

B.8) Shall conduct the Program in accordance with HUD standards or HUD accreditation of the Program as set forth in HUD's "Use of Materials Bulletin No. 82" ("HUD Building Product Standards and Certification Program for Sealed Insulating Glass Units").

IT IS FURTHER AGREED THAT:

C.1) A certification test hereunder denotes and is limited to a test in accordance with the requirements of the appropriate specifications and related test methods.

C.2) Each branch or affiliated plant of each Licensee manufacturer must be registered individually, and products therefrom tested and certified separately and apart from products manufactured in other plants or branches of any Licensee manufacturer.

C.3) A procedure exists for handling complaints of non-compliance which provides for samples of like product to be provided by Licensee in a specified manner for repetition of tests within thirty (30) days, the total cost of which, including test specimens, is to be borne by the complainant, unless the test proves non-compliance, in which case the costs will be borne by the Licensee; tests are to be initiated by the Licensor promptly upon receipt of a complaint in writing along with the appropriate surety deposit.

C.4) This agreement shall become effective on the date of signing and shall extend for a period of 12 months and shall be renewed automatically for successive periods of 12 months each, and remain in effect unless Licensor or Licensee, at least sixty (60) days prior to the date of expiration, gives notice in writing that cancellation or termination is requested (which shall be deemed agreed and effective at the conclusion of said notice period) and unless revoked and terminated by Licensor for causes set forth in this Agreement and in accordance with procedures set forth in the Agreement and the IGCC® Certification Program Procedural Guidelines.

C.5) If this agreement is terminated, then upon the effective date of such termination, Licensee shall:

- a) Not affix the registered quality Certification Labels to any product which Licensee shall thereafter manufacture; and
- b) Make no further reference to, or use of, Licensor's Certification Program or registered Certification Labels as used earlier in the Certification Program.

C.6) Licensor, in the event it shall be necessary to exclude Licensee from participation in the Certification Program in accordance with the provisions hereof, may do so by giving Licensee thirty (30) days written notice of Licensor's termination of the License Agreement.

C.7) The terms of this Agreement and any disputes arising from this Agreement, and any arbitration pursuant to this Agreement, shall be governed by the laws of the State of Illinois, in which Licensor is incorporated. The parties agree that all disputes relating to the interpretation of, or otherwise arising from the terms of, this Agreement not settled amicably between them will be submitted (following a mandatory 20 day period in which no claim shall be submitted to arbitration and during which the parties will seek a mutually agreeable resolution of any claim or dispute) to binding contract arbitration, unless both parties consent to mediation or some other form of dispute resolution. In the event of contract arbitration, the arbitration will be conducted by a neutral third party arbitrator accepted by both parties. In the event that the parties do not agree to the appointment of any arbitrator, any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be resolved under the most-current Commercial Arbitration Rules of

the American Arbitration Association. The place of the arbitration shall be in Illinois, or some other mutually agreeable location. In any arbitration proceeding, reasonable discovery of evidence shall be allowed, and strict conformity to legal rules of evidence shall not be necessary, and the parties may offer evidence as is relevant and material to the dispute, which shall be considered in the arbitrator's reasonable discretion. The arbitrator, exercising his or her discretion, shall conduct the proceedings with a view to expediting the resolution of the dispute. If any party submits an arbitration claim to enforce any of the terms of this Agreement, the prevailing party shall be entitled to recover reasonable attorneys fees and costs it may incur in connection with the arbitration proceeding. A final award by the arbitrator shall be enforceable in any court of competent jurisdiction.

C.8) In the event any part or parts of this Agreement are found to be void, the remaining provisions shall nevertheless be binding with the same effect as though the void parts were deleted.

C.9) The use of any Label governed by this Agreement on any unqualified product, or the use of any such Label by a manufacturing or assembly or other facility other than that registered will not be permitted by the Licensee, its employees, its representatives, and its agents. If the use of any Label in contravention of this Agreement is discovered, after a due process hearing review by the Certification Committee, the Licensor will have cause to institute or seek all or any of the following actions: a) Revocation of license; b) Imposition of an award in favor of Licensor of liquidated damages of five thousand dollars (\$5,000); c) Legal action preventing the Licensee from having the applicable Labels printed, attached, or used in any manner by Licensee, with the entire cost of such legal action to be borne by the Licensee.

C.10) In the event Licensor promptly notified all those to whom it has sent the then most recent issue of the Certification Directory or supplement thereto, as well as the National Better Business Bureau and the trade press, regarding any incorrect listing or reference to Licensee's product(s) published in any Certification Directory, supplement thereto, or elsewhere, Licensee agrees not to hold Licensor liable in any way for any damage caused by such incorrect listing or reference, unless such damage was the result of an intentional tort, willful act or gross negligence by Licensor.

C.11) Licensee shall indemnify and hold Licensor harmless as to any expense whatsoever for, or incurred in connection with, any claims, losses, or defense of claims or losses, which may be asserted by a third party against Licensor by reason of this Agreement and services performed hereunder, and shall name the Licensor, as its interest may appear, as an additionally insured party on any products liability insurance policy owned by the Licensee which affects those products of the Licensee certified under this Agreement; and proof of such coverage shall be sent by the Licensee to the Licensor within fifteen (15) days from the date of Certification or the date such coverage is secured, whichever first occurs.

C.12) Neither party shall make use of the others' trademarks, trade names or name in any manner without the prior written approval of the other provided each party hereby authorizes the other, during the term of this Agreement, to state that the Licensee is a participant in this Certification Program.

THIS LICENSE AGREEMENT may not be transferred, assigned, or otherwise disposed of to any other company, individual, or successor company without the express prior written consent of both Licensee and Licensor. By mutual agreement of Licensor and Licensee, THIS AGREEMENT supersedes and replaces the predecessor IGCC ® Standard License Agreement, in the form executed between Licensor and Licensee, if Licensor and Licensee have executed any such predecessor IGCC® Standard

February 2009

License Agreement. If such a predecessor agreement was executed, that predecessor agreement is hereby cancelled, by mutual agreement, effective as of execution of THIS AGREEMENT (which is a successor standard agreement to the earlier IGCC® Standard License Agreement), with the 60 days notice of

cancellation period for the predecessor agreement hereby waived by Licensee.

LICENSEE: Company \_\_\_\_\_

Street Address \_\_\_\_\_

City, State and Zip \_\_\_\_\_

Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

Signed By \_\_\_\_\_ Title \_\_\_\_\_  
(Corporate Officer or Authorized Representative)

Date \_\_\_\_\_

Signed By \_\_\_\_\_ Title \_\_\_\_\_  
(Primary IGCC® Engineering or Quality Dept. Contact)

Date \_\_\_\_\_

LICENSOR: INSULATING GLASS CERTIFICATION COUNCIL, INC. (IGCC®)

By \_\_\_\_\_ Title \_\_\_\_\_

Date \_\_\_\_\_

Insulating Glass Certification Council  
P.O. Box 730, 100 West Main Street  
Sackets Harbor, NY 13685  
Telephone: (315) 646-2234 Fax: (315) 646-2297

\*A COPY SIGNED BY LICENSOR WILL BE RETURNED TO LICENSEE.

March 2006 Revision



**IGCC® APPROVED LABORATORIES PRESENTLY CONDUCTING  
TESTS IN ACCORDANCE WITH ASTM E2190**

Participants in the program may choose any laboratory from the approved lab list.

- |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>25 Architectural Testing Inc.</b><br/>2865 Market Loop, Suite B<br/>Southlake, TX 75092<br/>Attn: John Waskow<br/>jwasko@archtest.com<br/>Phone: 817.410.7202<br/>Fax: 817.424.8463</p>                                                 | <p><b>45 ETC Laboratories</b><br/>297 Buell Road<br/>Rochester, NY 14624<br/>Attn: Ben Meunier<br/>ben@etclabs.com<br/>Nancy Spetz<br/>nancy@etclabs.com<br/>Phone: 585.328.7668<br/>Fax: 585.328.7777</p>                                                                              |
| <p><b>30 Architectural Testing Inc.</b><br/>130 Derry Court<br/>York, PA 17402-9405<br/>Attn: Scott Swaltek<br/>sswaltek@archtest.com<br/>Attn: Christian Lapadat<br/>Clapadat@archtest.com<br/>Phone: 717.764.7700<br/>Fax: 717.764.4126</p> | <p><b>50 Bodycote Materials Testing Canada</b><br/>2395 Speakman Drive<br/>Mississauga, Ontario L5K 1B3 Canada<br/>Attn: David Bailey, Ext. 307<br/>Bailey.d@bodycote.ca<br/>Attn: Andrew Cameron, Ext. 593<br/>Cameron.a@bodycote.ca<br/>Phone: 905.822.4111<br/>Fax: 905.823.1446</p> |
| <p><b>35 Architectural Testing Inc.</b><br/>2524 East Jensen Avenue<br/>Fresno, CA 93706<br/>Attn: Leaton Kirk<br/>lkirk@archtest.com<br/>Attn: Ricardo Cortes<br/>rcortes@archtest.com<br/>Phone: 559.233.8705<br/>Fax: 559.233.8360</p>     | <p><b>55 China National Safety Glass Testing</b><br/>Guanzhuang Donlgi<br/>Chaoyang District<br/>Beijing, PR China 100024<br/>Attn: Xin Yong Shi<br/>rockyshi@263.net<br/>Phone: 86.10.51167390</p>                                                                                     |
| <p><b>40 Architectural Testing Inc.</b><br/>849 Western Avenue N<br/>St. Paul, MN 55117-5245<br/>Attn: Dan Johnson<br/>djohnson@archtest.com<br/>Phone: 651.636.3835<br/>Fax: 651.636.3843</p>                                                | <p><b>60 CAN-BEST</b><br/>38 Regan Road, Unit 4<br/>Brampton, ON L7A 1C6 Canada<br/>Attn: Elie Alkhoury<br/>elie@can-best.com<br/>Phone: 905.840.2014</p>                                                                                                                               |
| <p><b>65 National Certified Testing Labs</b><br/>Five Leigh Drive<br/>York, PA 17402<br/>Attn: Dan Zeiders<br/>dzeiders@nctlinc.com<br/>Phone: 717.846.1200</p>                                                                               |                                                                                                                                                                                                                                                                                         |

INSULATING GLASS  
**IGCC**<sup>®</sup>  
CERTIFICATION COUNCIL

PRESORTED  
STANDARD  
U.S. POSTAGE  
PAID  
PERMIT 369  
SOUTH BEND, IN

P.O. Box 730  
Sackets Harbor, NY 13685

CHANGE SERVICE REQUESTED