



# Pro-MSP™

## HARDWOOD ADHESIVE WITH MOISTURE VAPOR PROTECTION

TECHNICAL DATA SHEET 05/01/2023

### KEY FEATURES

- Easy spread & clean
- Subfloor moisture protection
- Low odor & VOC

### DESCRIPTION

Pro-MSP™ is a hardwood and bamboo adhesive and moisture control membrane all in one. This adhesive formulation maintains long term durability and moisture control properties, and it is easy to spread and clean off of prefinished flooring before and after cure. This adhesive has low VOC's (as measured per EPA Method 24) and does **NOT** contain any water.

### MOISTURE AND PH PROTECTION

Pro-MSP™ has low moisture vapor permeability and is not adversely affected by moisture. As a result, it will reduce moderate amounts of moisture vapor transmission through the concrete. When applied as directed as a moisture vapor membrane, it will prevent damages caused by subfloor moisture beneath dimensionally stable, engineered wood flooring only. Pro-MSP™ may be used for concrete slabs with elevated moisture levels up to 15 lbs. per 1,000 square feet per 24 hours (using an anhydrous calcium chloride test kit according to ASTM F-1869 test method), and up to 87% RH (tested in accordance with ASTM F-2170). For substrates that have an MVER of greater than 15 lbs or 87% RH, use Bostik Ultra-Set® SingleStep2™ or GreenForce® for unlimited moisture vapor protection, or use MVP4® prior to the application of Pro-MSP™.

### ANTI-FRACTURE PERFORMANCE

Pro-MSP™'s elastomeric characteristics establish an anti-fracture membrane that can bridge cracks up to 1/8" (3mm) which can occur in the substrate prior to or after installation. This superior elasticity allows the adhesive to move with the wood as it expands and contracts with changes in humidity and temperature over the life of the floor.

### ULTIMATE VERSATILITY

#### HIGHLY VERSATILE

Pro-MSP™ may be used to adhere all engineered, solid, bamboo, cork, and parquet. It may be used over all properly prepared substrates common to hardwood flooring installations including: concrete, plywood, OSB, well bonded vinyl/VCT and ceramic tile, cement backer board, gypsum underlayments (dry, above grade), cement patch/underlayments, radiant-heat flooring, and properly prepared terrazzo.



### LEED® CONTRIBUTION

This low VOC formulation (as measured per EPA Method 24) may contribute toward LEED® credits under section EQ 4.1: Low-Emitting Materials — Adhesives & Sealants.

### DIRECTIONS FOR USE

Read and understand data sheet completely before beginning installation. Follow industry standards, as well as flooring manufacturer's recommendations for acclimation, design, layout and application of wood flooring material. If jobsite conditions are outside of flooring manufacturer's recommendations, take necessary corrective actions. Whether the moisture content of substrate exceeds or is within the flooring manufacturer's recommendations, to address current or possible future subfloor moisture, and cracks (up to 1/8"), apply Pro-MSP™ as directed.

### SURFACE PREPARATION

Surfaces must be absorptive, clean, free from loose materials, oil, grease, sealers, curing compounds, waxes, silicates, laitance, and all other surface contaminants that may inhibit proper bond. Completely remove cutback adhesive residue or other surface contaminants by diamond grinding to open the pores of the concrete. All surfaces to be treated must have a concrete surface profile (CSP) of 1-3 (similar to a broomed finish), as defined by ICR (International Concrete Repair Institute, Guideline No. 03732). Maximum acceptable floor variation is 3/16" in 10 feet. Areas

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requiring patching or leveling must be done using a Portland cement-based material (e.g., Bostik Webcrete® 95, Webcrete® 98, SL-100™, SL-150™, SL-175™, SL-200™, SL-Rapid™ or UltraFinish™ Pro).

**PLEASE NOTE:** Concrete substrate should **NOT** be smooth and reflective; it must have a concrete surface profile of CSP 1-3 (similar to a broomed finish), as defined by ICRI (International Concrete Repair Institute, Guideline No. 03732). It is advisable to test for adequate substrate absorption and texture in several areas throughout the jobsite by sprinkling droplets of water onto the slab. The drops of water should show signs of penetrating the substrate within one minute. This is evidenced by a water stain on the concrete without a “domed” droplet. If no signs of water penetration are shown within one minute and “domed” droplets remain (similar to drops on a car hood) the substrate will need to be mechanically textured.

## INSTALLATION

The installation begins with a starter row secured to the subfloor; the starter row provides a stationary point to push against so flooring doesn't move during installation. Once the starter row is secured, apply adhesive/membrane to substrate using the appropriate trowel. See the chart on last page for proper trowel selection. Flooring is to be installed using a “Wet-Lay” method of installation. For a “Wet-Lay” type of installation, spread the adhesive and begin to install the flooring immediately. Periodically lift boards immediately after installation to ensure proper slab coverage and transfer to the back of the flooring. If a thin skin forms on the adhesive on the slab prior to installation of the flooring, it may be possible to re-trowel the adhesive and obtain proper coverage and transfer. Re-trowel 90° to the ridges, and if no sign of the original trowel marks remains, install additional flooring and check coverage and transfer. Adhesive that has cured too much prior to installation of the flooring must be mechanically removed and fresh adhesive applied.

Although it is relatively easy to remove Pro-MSP™ adhesive from the face of prefinished hardwood even after cure, it is recommended to clean with a non-abrasive towel as you work prior to cure. After a few rows have been installed, and as you move across the room, tape the boards together using removable 3M #2080 Blue tape to prevent boards from sliding and to secure close-fitting joints. Flooring that is not flat should be tacked, weighted, or rolled to ensure proper contact between the flooring and substrate.

**Plywood Over Concrete:** Score 4' x 4' or 2' x 8' sheets of 3/4" exterior grade plywood on the backside every 8" to 10" by using a circular saw and cutting one-half the thickness of the plywood; “scoring or kerfing” takes the tension out of the plywood and helps to prevent possible warping or curling. Using a recommended trowel, apply adhesive/membrane to substrate and then set plywood into the wet adhesive/membrane. For moisture protection, ensure 100% coverage and transfer. Allow the adhesive/membrane to fully cure before nailing or using Pro-MSP™ adhesive/membrane to install flooring. Make sure that nails do not penetrate through the Pro-MSP™ membrane.

## GLUE ASSIST

Pro-MSP™ may be used for glue assist of mechanical fasteners on wood subfloors when suggested or required by flooring manufacturers. Cut sausage foil just below the end-clip. Place sausage into manual or pneumatic caulking dispenser. Cut the tip of the nozzle to produce a bead of adhesive at least 1/4" in diameter and place on top dispenser.

Gun Pro-MSP™ onto the subfloor or the backside of the board with a continuous bead at least 1/4" in diameter. Per NWFA recommendations, the adhesive should be applied in a manner that covers the entire width and length of each plank, to within 1" from the edges and ends of each board. Pro-MSP™ may be applied by following patterns. The Serpentine pattern should be applied where the full curve is approximately twice the width of the board. The Parallel Stripes pattern should be applied perpendicular or diagonal to the length of the board, and the adhesive is applied

every 6-8" intervals. The Ends and Grooves pattern should be applied such that the adhesive is within 1" from both ends of the board, in addition, the adhesive is applied along the entire groove end of the board. The Lengthwise Parallel Stripes pattern should be applied within 1" of each long side edge; the adhesive is also applied down the middle of the board. Refer to the NWFA guidelines for further Glue-Assisted Nail-Down installation instructions.

Press plank firmly into place, then set mechanical fasteners per the flooring manufacturer or NWFA guidelines. The average coverage of a 1/4" diameter bead produces 60 linear feet per 20 fl. oz. sausage. **PLEASE NOTE:** Glue assist is for bond only and offers no moisture vapor protection. As a result, glue assist should only be performed on subfloors that have moisture mitigation or environmental controls beneath, matching the temperature and humidity levels of the space above. Do not apply adhesives over asphalt felt papers or other loose-lay underlayments.

## CLEAN UP

While Pro-MSP™ bonds tenaciously to concrete and flooring, it is designed not to bond with most finishes on pre-finished flooring, making it relatively easy to remove from the finish even after cure. Although it is relatively easy to remove after cure, it is recommended to clean with a non-abrasive towel as you work prior to cure. After cure, adhesive may be removed with a plastic scraper and dry, non-abrasive towel, taking care not to damage the finish. Immediately clean all tools and equipment before material cures.

**TROWEL CLEAN-UP TIP:** Before use, cover areas of the trowel that are not used to spread the adhesive with duct tape or blue tape. After use, simply tear off tape before material cures, and clean the remainder of the trowel with a towel.

## STORAGE/SHELF LIFE

Store at temperatures between 50°F (10°C) and 100°F (38°C).

Shelf life is one year from date of manufacturing in closed, original packaging.

**Re-Seal Partially Used Container:** Clean all adhesive residue off of the lip of the pail and the groove around the perimeter of the lid. Plastic (e.g., a trash bag) may be placed into the pail to cover the wet adhesive, especially in high humidity environments, but do not allow the plastic to extend outside of the pail and interfere with the seal of the pail with the lid. Use a rubber mallet to fully seat the lid on the pail. Do not turn the pail over.

**Re-Open Partially Used Container:** Remove the lid. Peel any cured material away from pail and discard cured material and plastic from the top of the pail. Any uncured material may be used.

## LIMITATIONS

- Periodically check coverage of adhesive during installation; 100% substrate coverage and adhesive transfer is required to protect against damages from subfloor moisture.
- Due to limitations with solid and bamboo wood flooring (e.g., lack of dimensional stability), “below-grade” installations are limited to engineered hardwood flooring.
- On or below-grade substrates must have appropriate vapor barrier (6 mil poly or better) properly installed below slab.
- Do not install solid wood or bamboo flooring over VCT/vinyl.
- Bamboo installations should follow solid hardwood flooring installation recommendations.
- **Do not use Pro-MSP™ as a moisture vapor membrane beneath solid or bamboo flooring.**
- Slab temperature should be between 50°F and 90°F (10°C and 32°C) during installation.
- Do not use on wet, dusty, contaminated, glassy smooth or friable substrates; do not use over substrates/slabs treated with sealers or curing compounds.
- Do not use in areas subject to hydrostatic head.
- Do not use over perimeter bonded flooring material.

- Completely remove all adhesive residue and other surface contaminants from the slab by diamond grinding, shot blasting, or scarifying.
- Use over gypsum-based/underlayments is limited to dry, "above-grade" installations where the gypsum has dried hard (not dusty/powdery), with a minimum compressive strength > 2,000 psi for engineered hardwood installations, or minimum compressive strength > 2,500 psi for solid hardwood installations.
- Please refer to flooring manufacturer's recommendations and NWFA's specifications for proper acclimation, verification of moisture content of flooring with a moisture meter, and expansion relief around perimeter throughout installation.
- For substrates with any history of moisture problems, or for solid hardwood or bamboo on concrete slabs exceeding 3lb MVER or 75% RH, use a high performance moisture vapor reduction product such as Bostik MVP4® prior to the application of Pro-MSP™, or use Bostik Ultra-Set® SingleStep2™ or GreenForce®.
- Do not use vinyl-backed cork flooring or foamed backed parquet.
- This membrane does **NOT** reduce/affect issues originating from the sides, ends, or top of flooring (i.e. puddles, water leaks, wet mopping, hydrostatic-head, etc.).
- This membrane does **NOT** eliminate all possible moisture related or install-related issues (i.e. improper acclimation of flooring, jobsite temperature/relative humidity, etc.).
- This membrane is designed to prevent excessive variance of moisture between the top, middle, and bottom of flooring that originates from the substrate.

#### PACKAGING

4 gallon pails (36 pails/pallet)  
20 fl. oz. sausages (12 sausages/case; 90 cases/pallet)

#### OPEN TIME CHART

Temperature	Humidity		
	40%	60%	80%
60°F (16°C)	2.3 Hours	2.0 Hours	1.0 Hours
70°F (21°C)	2.0 Hours	1.0 Hours	45 Minutes
80°F (27°C)	1.0 Hours	45 Minutes	30 Minutes

**Note:** This chart is for reference only; actual jobsite times may vary.

#### CAUTION

IRRITANT. MAY IRRITATE EYES, SKIN OR RESPIRATORY TRACT. CONTENTS MAY BE HARMFUL IF SWALLOWED OR INHALED. Methanol may form during curing. Do not breathe fumes. Do not get in eyes, on skin or on clothing. Do not swallow. Handle with care. Use only in a well ventilated area or wear a mask. Wear protective clothing including gloves. Wash thoroughly after handling. Keep container closed. Store in a cool, dry area. Do not reuse container.

#### KEEP OUT OF REACH OF CHILDREN

#### FIRST AID TREATMENT

Contains calcium carbonate and quartz silica inextricably bound in a polymer matrix. If in eyes or on skin, rinse with water for at least 15 minutes. If on clothes, remove clothing. If breathed in, move person to fresh air. If swallowed, call a Poison Control Center or doctor immediately. Do not induce vomiting.

#### SEE SAFETY DATA SHEET

**Chemical Emergency:** 800-424-9300 (USA),

703-527-3887 (International)

**Medical Emergency:** 866-767-5089

#### CHEMICAL & PHYSICAL PROPERTIES

<b>Chemical Properties</b>	Chemistry Type	1-part MS Polymer Adhesive	
	Adhesive Type	Moisture Cure	
	VOC Compliant (calculated per SCAQMD Rule 1168)	Yes (33 g/L)	
	Solvent Free	Yes	
<b>Use Environments</b>	Flash Point	>200°F (93°C)	
	Residential	Yes	
	Offices/Light Commercial	Yes	
	Heavy Commercial/Retail	Yes	
	Hospital/Healthcare	No	
	Industrial	No	
<b>Substrates</b>	Exterior	No	
	Wet Areas	No	
	Concrete	Yes	
	Concrete Board	Yes	
	Concrete Patch/SLU	Yes	
	Gypsum Underlayment	Yes	
	Plywood	Yes	
	OSB	Yes	
	Ceramic Tile	Yes	
	Terrazzo	Yes	
<b>Flooring Types</b>	Well-Bonded Vinyl	Yes	
	Solid Hardwood	Yes	
	Engineered Hardwood	Yes	
	Bamboo	Yes	
	Cork	Yes	
	Parquet	Yes	
<b>Application Properties</b>	Ceramic Tile, Marble, Stone Inlays*1	No	
	Application Method	Trowel	
	Ease of Application	Easy	
	Odor	Slight	
	Required Flash Time	0 min	
	Open/Working Time*2	60 min	
	Color	Brown	
	Density (lbs/gallon)	15.44	
	Wet Lay	Yes	
	Walk-On-Work prior to cure	No	
	Percent of Adhesive Coverage & Transfer Required	For Moisture Protection	For Bond
	Engineered	100%	>80%
	Solid	100%	>95%
	Application Temp Range	50°F-90°F (10°C-32°C)	
	Shelf Life	1 year	
	Ease of Clean, Wet	Very Easy	
	<b>Cured Physical Properties</b>	Ease of Clean, Cured	Easy
Dry Time: Light Traffic		6-8 hrs	
Dry Time: Normal Traffic		12-24 hrs	
Service Temp Range		-40°F to 150°F (-40°C to 66°C)	
Elongation		>100%	
Water Vapor Permeability*3		<0.8	
Concrete Moisture Vapor Limits for subfloor moisture vapor protection:			
For engineered hardwood			
ASTM 1869 Calcium Chloride Method		≤ 15 lbs/ 1000 sq ft /24 hrs	
ASTM 2170 Relative Humidity Test		≤ 87% RH	
For solid hardwood or bamboo			
ASTM 1869 Calcium Chloride Method	≤ 3 lbs/ 1000 sq ft /24 hrs		
ASTM 2170 Relative Humidity Test	≤ 75% RH		
<b>Sound Reduction Performance</b>	ASTM E492-09 IIC		
	8" concrete slab with no ceiling	50 dB	
	8"concrete slab with 1 layer 5/8" gypsum board ceiling	64 dB	
	ASTM E90-09 STC		
	8" concrete slab with no ceiling	53 dB	
	8"concrete slab with 1 layer 5/8" gypsum board ceiling	61 dB	

\*1 Light commercial and/or residential applications.

\*2 Please refer to Open/Working Time chart.

\*3 Per ASTM F-1249 standard test method for water vapor transmission rate through plastic film and sheeting using a modulated infrared sensor. Ratings are g/m<sup>2</sup>-24 hr-mmHG.

## TROWEL SELECTION

In order to form a membrane that functions properly for moisture vapor protection, the correct trowel needs to be selected to achieve both 100% coverage of the substrate and 100% transfer to the back of the flooring. Jobsite conditions, profile of the substrate, depth of back channeling in the flooring, and other factors affect the amount of adhesive that must be applied to achieve proper coverage and transfer. Always pull a floorboard at the beginning of, and during, the installation process to confirm adequate coverage and transfer. Trowel size may need to be changed to achieve the required coverage and transfer. See trowel suggestions below.

## ADHESIVE & MOISTURE MEMBRANE INSTALLATION METHOD

### Suggested Trowel (For use as an adhesive only, refer to adhesive only installation method.)

Engineered wood flooring up to 5/8" thick.  
Coverage: 30-35 sq.ft. per gallon



1/4" x 1/4" V-Notch



1/4" x 1/4" x 1/4" Square Notch



1/2" x 15/32" V-Notch



1/4" x 3/8" x 1/4" Square Notch

Trowel size is suggested to maximize coverage of adhesive. Periodically lift a board to ensure the following conditions are being met: 100% coverage of concrete substrate and 100% transfer to the back of the flooring product. Uneven subflooring may require the use of either a leveling/patching material, or a larger V-notched trowel for proper coverage of adhesive.

## ADHESIVE ONLY INSTALLATION METHOD

### Suggested Notched Trowel (For use as an adhesive and moisture control membrane, refer to chart above.)

Engineered hardwood flooring ≤1/2" thick.  
Coverage: 50 sq.ft./gallon



3/16" x 5/32" V-Notch

≤1/2" Parquet, or cork underlayment.  
Coverage: 80 sq.ft./Gallon



1/8" x 1/8" x 1/8" Square Notch

Engineered hardwood flooring >1/2" thick, Solid wood or bamboo flooring ≤1/2" thick, and parquet ≤3/4" thick.  
Coverage: 40 sq.ft./gallon



1/4" x 1/4" x 1/8" Square Notch

Solid wood or bamboo flooring >1/2" thick.  
Coverage: 35 sq.ft./gallon



1/4" x 1/4" x 1/4" Square Notch

Trowel size is suggested to maximize coverage of adhesive. Periodically check coverage of adhesive during installation: >80% coverage and transfer to the back of the flooring is required for all engineered wood flooring; >95% coverage and transfer is required for all solid wood flooring or bamboo flooring products.

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