

MS 011 Engineered Wood Adhesive

MSI's **MS 011** is a user-friendly, one-component urethane adhesive and moisture-vapor-control membrane. It offers a flexible and strong bond across diverse substrates. Its elastomeric properties enable it to adjust with wood movement, accommodating expansion and contraction throughout the floor's lifespan. With a lengthy open time, MS 011 facilitates quicker and simpler installations. **MS 011** has low VOC levels and does not contain any water.

For use with engineered hardwoods
99% RH

Designed to reduce moisture-vapor emissions that originate from the substrate

DIRECTIONS FOR USE:

Read and understand data sheet completely before beginning installation. Follow industry standards and flooring manufacturer's recommendations for acclimation, design, layout, and application of wood flooring material. Please refer to flooring manufacturer's recommendations and NFWA's specifications for proper acclimation, verification of moisture-vapor content of flooring with a moisture-vapor meter, and expansion relief around perimeter throughout installation.

MS011 functions as a moisture-cure adhesive, with humidity playing a more significant role in the curing process than temperature. Increased humidity accelerates the curing rate, whereas colder and drier conditions prolong the curing time of this adhesive.

APPROVED FLOORING TYPES:

WOOD: Engineered hardwood.

APPROVED SUBSTRATES & SURFACES:

Concrete, plywood, OSB, well-bonded vinyl, Terrazzo, ceramic tile, cement patches/underlayments, dry, above grade gypsum, recycled rubber underlayment

SURFACE PREPARATION:

All surfaces must be absorptive, clean, and 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 International Concrete Repair Institute (ICRI) Guideline No. 03732. Maximum acceptable floor variation is 3/16" in 10 feet. Areas requiring patching or leveling must be done using a Portland cement-based material. For cracks in concrete that are larger than 1/8", use a quality urethane sealant.

INSTALLATION:

Begin 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. Flooring may be installed using a "wet-lay" method of installation. For wet-lay installations, 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. As you work, immediately clean any adhesive from prefinished flooring with adhesive remover or mineral spirits (be careful not to harm finish), then dry buff with a nonabrasive towel. After a few rows have been installed, and as you move across the room, tape the boards together to prevent boards from sliding and to secure close-fitting joints. Rolling is recommended for most installations. For some sensitive factory applied finishes such as oil-based finishes, tape and rolling may not be recommended. Test to ensure that tape removal after rolling does not harm finish. Flooring that is not flat should be 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. Apply adhesive /membrane to substrate, and then set plywood into the wet adhesive/membrane. Allow the adhesive to fully cure before nailing or using MS 011 adhesive to install flooring. If nailing to the plywood, nails must not protrude through to the adhesive.

WORKING TIME: 180 minutes.

TRAFFIC: Light: 6-8 hours. Heavy: 8-12 hours.

MOISTURE & PH LIMITS: 99%RH and pH between 10-12.

CLEANUP:

As you work, immediately clean any adhesive from prefinished flooring with adhesive remover or mineral spirits (be careful not to harm finish), then dry buff with a nonabrasive towel. Immediately clean all tools and equipment with adhesive remover or mineral spirits before material cures.

STORAGE:

Store at temperatures between 50°F and 95°F (10°C and 35°C). Shelf life is one year from date of manufacturing in closed, original packaging.

LIMITATIONS:

- Periodically check coverage of adhesive during installation; 100% substrate coverage and adhesive transfer is required to protect against damages from subfloor moisture-vapor.
- Due to limitations with solid wood flooring (e.g., lack of dimensional stability), "below-grade" installations are limited to engineered hardwood flooring.
- For substrates with any history of moisture-vapor problems, engineered hardwood flooring on concrete slabs exceeding 99% RH, use a high-performance moisture-vapor reduction product or adhesive with unlimited RH rating.
- On- or below-grade substrates must have appropriate vapor barrier (6 mil poly or better) properly installed below slab.

- Slab temperature should be between 50°F and 95°F (10°C and 35°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.
- Completely remove all adhesive residue and other surface contaminants by diamond grinding, shot blasting, or scarifying.
- Do not use over perimeter bonded flooring material.
- 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.
- Please refer to flooring manufacturer's recommendations and NFWA's specifications for proper acclimation, verification of moisture-vapor content of flooring with a moisture-vapor meter, and expansion relief around perimeter throughout installation.
- Do not use in areas subject to hydrostatic pressure.
- Do not use MS 011 as a moisture-vapor membrane beneath solid flooring.
- This membrane is designed to reduce moisture-vapor emissions that originate/emanate from below the membrane only.
- This membrane does NOT reduce/affect issues originating from the sides, ends, or top of flooring (i.e., puddles, water, leaks, hydrostatic pressure, etc.).
- This membrane does NOT eliminate all possible moisture-vapor 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 vapor between the top, middle, and bottom of flooring that originates from the substrate.

HEALTH AND SAFETY:

DANGER: MAY BE HARMFUL IF SWALLOWED OR INHALED. CONTAINS POTENTIAL SENSITIZER. MAY CAUSE ALLERGIC SKIN OR LUNG REACTION. MAY IRRITATE EYES, SKIN AND RESPIRATORY TRACT. Do not breathe fumes. Do not get in eyes, on skin or on clothing. Do not swallow. Use only in a well-ventilated area or wear mask. Wash thoroughly after handling. Store container in a cool, dry area with lid tightly sealed. Do not reuse container. KEEP OUT OF REACH OF CHILDREN. SEE SAFETY DATA SHEET.

DISPOSAL:

Dispose of in accordance with local, regional, national, international regulations as specified. Read SDS for detailed product information. SDS may be obtained by calling (714) 685-7500.

CHEMICAL EMERGENCY:

Chemtrec #833717 (Transport/Environmental):
1-800-424-9300 or 1-703-527-3887 (Outside U.S.) Use reference CCN# 833717
Rocky Mountain Poison Center: 1-866-767-5089

SUPPLEMENTAL INFORMATION:

Shelf Life: 1 year from date of manufacture in unopened, properly stored container. Avoid excessive heat or cold. Protect from freezing. Store indoors at a temperature of 50°-95°F.

MADE IN USA

PROP 65 STATEMENT:

 **WARNING:** This product can expose you to chemicals including Quartz, which is known to the State of California to cause cancer, and Di-isodecyl phthalate, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Flooring	Trowel	Coverage Sq Ft / Gallon
ADHESIVE & MOISTURE-VAPOR MEMBRANE METHOD: Engineered flooring > 5/8" thick	1/4" x 1/4" V-notch 1/4" x 1/4" x 1/4" SQ-notch	30-35 30-35
Engineered flooring > 5/8" thick	1/2" x 15/32" V-notch 1/4" x 3/8" x 1/4" SQ-notch	20 20
Trowel size is suggested to maximize coverage of adhesive. Periodically lift a board to ensure the following conditions are being met: 95% coverage of concrete substrate and 95% 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 METHOD: Engineered flooring < 1/2" thick	3/16" x 5/32" V-notch	50
Engineered flooring > 1/2" thick	1/4" x 1/4" x 1/8" SQ-notch	40
Plywood > 1/2" thick	1/4" x 1/4" x 1/4" SQ-notch	35
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 is required for all solid wood flooring.		

DISTRIBUTOR IDENTIFICATION:

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