Bamboo Flooring Adhesive

DESCRIPTION
MORNING STAR MAX BAMBOO FLOORING ADHESIVE is a premium single-component, hybrid-polymer-based flooring adhesive specifically designed to bond bamboo flooring. MORNING STAR MAX BAMBOO FLOORING ADHESIVE also provides excellent sound-reduction properties that are required for multi-unit housing, and maximum moisture-reduction properties that protect bamboo flooring from moisture vapor emitting through concrete slabs.

FEATURES & BENEFITS
- Superior bond
- Moisture barrier; no moisture testing required
- Easy to apply
- Utilizes rapidly renewable resources
- Excellent sound reduction
- Superior crack isolation
- Cleans up easily

WHERE TO USE
For installing bamboo flooring or any solid or engineered wood flooring intended for glue-down application in the following areas:
- Interior residential (rental apartments, condominiums, homes)
- Interior commercial (office buildings, hotel rooms and hallways, restaurant dining areas)
- Interior heavy commercial (hotel lobbies, convention centers, airports, department stores)
- Interior institutional (hospitals, schools, universities, libraries, government buildings)

SUITABLE SUBSTANCES
- APA or CANPLY Group 1 exterior-rated plywood
- Concrete and properly prepared cement terrazzo
- Existing and properly prepared ceramic tile
- Exterior-approved, cement-based patching compounds

LIMITATIONS
- For interior installations only
- Do not use when the substrate temperature is below 50°F (10°C) or above 90°F (32°C), or when the RH exceeds 65%.

APPLICATION
Read all installation instructions thoroughly prior to installation. Wear all appropriate personal safety equipment during use. Refer to MSDS for more information.
1. Remove special clips found inside the bucket, select the correct clip per the flooring thickness (see the "Approximate Coverages" chart) and attach to a standard 11" (27.9-cm) trowel.
2. Using the flat side of the trowel, key the adhesive into the subfloor, creating a smooth void-free surface.
3. Once the adhesive has been keyed in, immediately spread the adhesive using the special clip-on trowel attachment. Trowel ridge lines should be perpendicular to the direction of the wood-flooring installation. Hold the trowel at a 60° to 90° angle to the subfloor, making sure that the subfloor is covered 100% with adhesive and that no void spots appear other than the "valley bottoms" created by the trowel. These areas will fill in as the wood is installed.
4. Only apply as much as can be installed within 45 minutes.
5. Install wood flooring in strict accordance with flooring manufacturer’s written instructions.
6. Install flooring immediately, pressing firmly into the adhesive bed to ensure that all ridges are compressed into a monolithic layer. Periodically check for 100% coverage over the subfloor and transfer onto the back of the flooring.
7. Keep gloves clean. Make every effort to prevent the adhesive from getting onto the flooring surface. Remove adhesive smudges immediately. Residue from MORNING STAR MAX BAMBOO FLOORING ADHESIVE may be removed through gentle rubbing to remove excess adhesive followed by a light wipe with a white cloth.
8. Clean tools while the adhesive is still fresh/wet using mineral spirits.
9. After each use, cover the unused portion of the adhesive completely with dense, nonporous plastic film and secure the lid tightly. Store in a dry area at room temperature (73°F [23°C]).

NOTE: Use a fresh clip-on trowel attachment for each bucket of MORNING STAR MAX BAMBOO FLOORING ADHESIVE used. Do not reuse clip-on trowel attachments. Proper coverage is paramount for warranty coverage.

PROTECTION
- Protect from light traffic for at least 12 hours. Protect from heavy traffic for at least 24 hours.
- Building owners should be advised of the wood-flooring manufacturer’s guidelines for climate-control settings (temperature and humidity). These conditions must be monitored and kept constant in order to ensure the overall performance and long-term success of the installation.
Application Characteristics over Porous and Non-Porous Substrates

<table>
<thead>
<tr>
<th>Flash Time*</th>
<th>Working Time**</th>
<th>Adjustability Time***</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 73°F (23°C) and 50% humidity</td>
<td>0 minutes</td>
<td>45 to 60 minutes</td>
</tr>
</tbody>
</table>

* Flash time: The amount of time recommended for the adhesive to remain exposed to the air following application before the installation of the floor covering.

** Working time: The maximum amount of time an adhesive can remain exposed to the air and still effectively bond to the floor covering.

*** Adjustability time: The window of time when adjustments can still be made to the position of the floor covering without compromising the bond of the adhesive.

NOTE: Working time and adjustment times vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

Product Performance Characteristics

<table>
<thead>
<tr>
<th>Polymer type</th>
<th>Hybrid polymer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent solids</td>
<td>100%</td>
</tr>
<tr>
<td>VOC</td>
<td>8 g/l</td>
</tr>
<tr>
<td>Odor</td>
<td>Light mint</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Shelf life</td>
<td>1 year when stored in original packaging at 73°F (23°C)</td>
</tr>
<tr>
<td>Storage conditions</td>
<td>50°F to 90°F (10°C to 32°C)</td>
</tr>
<tr>
<td>Flash point (Tag)</td>
<td>&gt; 200°F (93°C)</td>
</tr>
</tbody>
</table>

APPOROXIMATE COVERAGES†

<table>
<thead>
<tr>
<th>Flooring Type</th>
<th>Recommended Trowel</th>
<th>Coverage per 4 U.S. gals. (15,1 L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bamboo flooring &gt; 3/8&quot; (10 mm) thick</td>
<td>3/8&quot; x 3/16&quot; x 3/8&quot; x 1/16&quot; (10 x 4,5 x 10 x 1,5 mm)</td>
<td>120 to 160 sq. ft. (11,1 to 14,9 m²)</td>
</tr>
<tr>
<td>Bamboo flooring &lt; 3/8&quot; (10 mm) thick</td>
<td>1/8&quot; x 1/8&quot; x 1/8&quot; x 1/16&quot; (3 x 3 x 3 x 1,5 mm)</td>
<td>120 to 160 sq. ft. (11,1 to 14,9 m²)</td>
</tr>
</tbody>
</table>

† Trowel dimensions are depth/width/space/lift. Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to substrate conditions, type of trowel used and setting practices.

Contents: 4 U.S. gals. (15,1 L)

Sound-Reduction Ratings – Solid Oak 3/4” (19 mm) Thick Over a 6” (15-cm) Concrete Slab

<table>
<thead>
<tr>
<th>ASTM Test Method</th>
<th>Type of Sound-Transmission Measurement</th>
<th>Suspended Gypsum Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM E90-09/E413-04 (STC)</td>
<td>Airborne sound</td>
<td>66 (NGC Test No: 5010063)</td>
</tr>
<tr>
<td>ASTM E492-09/E989-09 (IIC)</td>
<td>Impact sound</td>
<td>68 (NGC Test No: 7010102)</td>
</tr>
<tr>
<td>ASTM E2179-03 (Delta IIC)</td>
<td>Impact sound</td>
<td>17 (NGC Test No: 7010101)</td>
</tr>
</tbody>
</table>

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.

Lumber Liquidators Services, LLC
3000 John Deere Rd
Toano, VA 23168
Lumberliquidators.com
1-800-HARDWOOD

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