ADHESIVE SELECTION

Proper adhesive selection is determined by the type of service the floor will receive. Using the proper adhesive will help maintain tight joints and reduce the potential for indentation from heavy loads.

**AD-32 Adhesive** is a pressure sensitive adhesive that can be used over all approved porous and non-porous substrates. AD-32 is recommended for residential and light commercial applications where heavy rolling and static loads are not expected. The adhesive is applied and then allowed to dry to a tack before installing flooring.

**AD-62 Commercial Adhesive** is a wet-set adhesive that dries hard and must be used in commercial applications, where heavy static or rolling loads are present, where temperature fluctuations are likely to occur or when adjustability during installation is desired. AD-62 is recommended for use over porous substrates and select non-porous substrates. DO NOT use AD-62 over existing resilient tile or sheet flooring products.

Specialty Adhesives - Use Mapei G21 or G15 when installing Structure in hospital rooms or medical facilities where Hill-Rom beds are used or where frequent surface wetting will occur such as in grocery store produce areas.

**RECOMMENDED SUBSTRATES FOR AD-62 ADHESIVE**

- **Porous Substrates (Concrete, wood underlayment and patching and levelling compounds)** - Before installing flooring allow adhesive to dry/flash for 5 to 10 minutes. The flooring must be laid in to wet adhesive to achieve 100% transfer of the adhesive to the back of the flooring when rolled.

- **Non-porous substrates (Cement terrazzo and some steel trowel finished concrete)** - It will be necessary to allow the adhesive to dry/flash longer when covering over non-porous surfaces. Before installing flooring allow adhesive to dry/flash 20 to 40 minutes or until the valleys between the trowel ridges turn clear (the trowel ridges will be wet) to achieve approximately 100% transfer of the trowel pattern to the back of the flooring when rolled.

**ADHESIVE SELECTION TABLE**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Trowel Notch</th>
<th>Spread Rate</th>
<th>Dry/ Flash Time</th>
<th>Working Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Approved Porous Substrates</td>
<td>1/16” x 1/32” x 1/32” U-notch (.16 x .08 x .08 cm)</td>
<td>200 - 250 ft²/gal (18.6 - 23.2 m²)</td>
<td>30 to 60 minutes</td>
<td>6 hours Up to 30 minutes</td>
</tr>
<tr>
<td>Approved Porous Substrates</td>
<td>1/16” x 1/16” x 1/16” Square-notch (.16 x .16 x .16 cm)</td>
<td>125 -150 ft²/gal (11.6 - 13.9 m²)</td>
<td>5 to 10 minutes</td>
<td>Up to 30 minutes</td>
</tr>
<tr>
<td>Approved Non-porous Substrates</td>
<td>1/32” x 1/16” x 1/32” U-notch (.08 x .16 x .08 cm)</td>
<td>185 -245 ft²/gal (17.2 - 22.8 m²)</td>
<td>20 to 40 minutes</td>
<td>Up to 20 minutes</td>
</tr>
</tbody>
</table>

**Note:** AD-62 Adhesive flash time and working time may vary based on temperature, humidity, substrate porosity, trowel application and jobsite conditions.

**GENERAL INFORMATION**

- Always store and transport cartons on a flat surface neatly stacked no more than 15 cartons high. Ideal storage temperatures range from 50°F to 90°F (10°C to 32°C).

- Acclimate the room(s) flooring and adhesive at a constant temperature between 65°F and 85°F (18°C and 29°C) for 48 hours before, during and 72 hours after installation. There after the room temperature should not exceed 90°F (32°C) or fall below 55°F (13°C).

- Make sure the pattern is correct and the lot numbers are the same on each carton.
SUBFLOORS AND PREPARATION

For detailed information on subfloors and preparation, please refer to supporting document Suitable Substrates at www.congoleum.com. Certain requirements may apply in order to prepare these substrates for resilient flooring. Substrates covered with existing flooring may also be acceptable for residential and light commercial applications.

Ensure that concrete subfloors are sufficiently dry by conducting moisture and pH tests. The subfloor, regardless of the type must be flat, smooth, clean, dry, structurally sound and free of paint, old adhesive residue, wax, grease, oil, solvent, curing and parting compounds and other substances that could interfere with adhesion or the performance of the flooring. Never use liquid adhesive remover or solvent cleaners for removing old adhesive residue or other substances on the subfloor. These substances must be mechanically removed. Conduct bond tests to confirm suitable adhesion to the substrate. The flatness of the subfloor is particularly important for keeping joints tight and in alignment when installing large format tiles. Deviations in the subfloor should not exceed 3/16” in 10’ or 1/16” in 1’. Subfloor deflection should not exceed 1/360th of the span.

SUITABLE SUBSTRATES AND SURFACE MATERIALS

- Fully cured, dry concrete on all grade levels (Moisture vapor emissions should not exceed 5 pounds (ASTM F1869) or 80% RH (ASTM F2170) with a pH range between 5 and 9).
- Approved suspended wood floors and underlayments.
- Cement-based self-levelling underlayments and patching compounds.
- Prepared ceramic tile, marble and cement terrazzo
- Aluminum, steel and stainless steel.
- Radiant-heated subfloors where the maximum surface temperature of the floor does not exceed 85F (29ºC) in any area.

The following existing floors may be suitable for residential and light commercial applications only.

- Existing qualifying resilient sheet flooring-single layer, fully adhered and well bonded.
- Existing vinyl composition tile (VCT) - single layer, well bonded over on or above grade level only.

Note: Some previously manufactured vinyl floor covering and asphalt “cutback” adhesive contain asbestos. For preparation or removal of these products, refer to the Resilient Floor Covering Institutes publication “Recommended Work Practices for the Removal of Resilient Floor Covering. These work practices must be followed. For a copy of the recommended work practices, please contact: Resilient Floor Covering Institute (RFCI) 401 East Jefferson Street, Suite 102, Rockville MD 20850.

Warning: Do not sand, dry sweep, dry scrape, drill, saw, beadblast or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphaltic “cutback” adhesive or other adhesive. These products may contain asbestos fibers or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the product is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern the removal and disposal of the material. If you must remove old flooring material contact the Resilient Floor Covering Institute to obtain a copy of the Recommended Work Practices for the Removal of Resilient Floor Covering.

JOB SITE CONDITIONS

- Resilient flooring installation should be scheduled after all other trades have completed their work.
- The HVAC systems must be in operation for at least 10 days prior to flooring installation and thereafter to maintain a constant temperature. Portable heaters may not provide adequate heat. Never use kerosene heaters.
- Proper acclimation of the room, subfloor, flooring material, adhesive and all installation accessory products is critical to the success of the adhesive and flooring performance. Installation over cold subfloors will delay adhesive flash time and dry time, effect the size of the floor and increase the potential for indentation and or adhesive displacement. The subfloor temperature must be between 65F and 85°F (18ºC and 29ºC) at the time of installation.
- Acclimate the room(s) flooring and adhesive at a constant temperature between 65°F and 85°F (18ºC and 29ºC) for 48 hours before, during and 72 hours after installation. Thereafter the room temperature should not exceed 90ºF (32º C) or fall below 55ºF (13ºC).
- Unopen cartons of flooring should be neatly stacked in the room where they will be installed during the acclimation period. Open cartons just prior to installation.

SPECIAL INSTALLATION REQUIREMENTS

- All plank products should be installed with end joints randomly staggered at least 8” apart. Avoid using pieces less than 6” long at the end of the row.
- Planks and tiles can be combined on custom installations
- 18”x 36” tiles can be installed in an ashlar layout with a 9”, 12” or 18” drop pattern, depending on the desired appearance. A square layout with all 4 corners lined up is not recommended.
- 18”x 18” and 18”x 36” tiles have directional arrows printed on the back. Turn tiles randomly in alternating directions to achieve the best visual appearance.
- When installing flooring in a wet-set application with AD-62, the flooring must be rolled with a 100 pound three section roller immediately after completing each section and while adhesive is still wet and again 1 hour later.
- Proper adhesive selection and application will ensure good adhesion, tighter joints and reduce the potential for indentation from rolling and static loads.
INSTALLATION RECOMMENDATIONS

LAYOUT
Layout will depend on the product size and adhesive system being used. Snap a chalk line down the center of the floor parallel with the long dimension of the room. Adjust the chalk line if necessary to avoid narrow pieces at the walls. When installing 18”x 18” or 18”x 36” tiles it will be necessary to snap additional chalk lines perpendicular (90°) to the center line. Also see special instructions for AD-62 wet-set adhesive applications.

When planning the layout make sure tile and plank joints fall at least 6” (15.2cm) away from joints in the underlayment and or seams in existing flooring. Do not install over expansion joints.

CUTTING
Structure can be trimmed to fit using a sharp utility knife or tile cutter. When using a utility knife, score the surface of the tile or plank and flex it downward to break it at the score mark. Always place the cut edge against the wall.

FOR INSTALLATION WITH AD-32
PRESSURE SENSITIVE ADHESIVE
Apply AD-32 Adhesive over one-half of the subfloor up to the chalk line. Allow adhesive to dry completely to a tack, normally 30 to 60 minutes, longer in cool or humid conditions. Adhesive will turn from off white to clear when dry.

Carefully install the first row of tile or plank along the edge of the chalk line. When installing plank, start with a whole plank in the first row. Use 2/3rds of a plank to start the second row and 1/3rd of a plank for the third row. Thereafter install planks in a random layout offsetting end joints by at least 8”. Complete each row including the cut piece at the end of the row. Always place cut ends against the wall. Clean any adhesive smears on the face of the flooring immediately with a clean wet cloth before it dries. Roll the floor with a 100 pound three section roller immediately after completing each section and while adhesive is still wet. Re-roll it again after 1 hour. Failure to roll the floor can result in poor adhesion and indentation of the finished floor.

FINISHING THE JOB
• Clean any adhesive smears on the face of the flooring immediately while wet with a clean cloth and dilute solution of neutral cleaner and water. Mineral spirits can be used to remove dried adhesive.
• Keep traffic off the newly installed floor for at least 24 hours after installation. Open to light traffic for the next 48 hours. Resume normal traffic after 72 hours.
• Protect the floor from rolling or static loads for at least 72 hours after installation to allow adhesive to set firm.
• Always use strips of hardwood or plywood when moving heavy objects such as furniture or equipment over the floor even when using carts or dollies with wheels.
• Allow adhesive to dry a minimum of 4 days before wetting or washing the new floor.

If unavoidable use a kneeling board. Fitting flooring net to the walls will reduce the possibility of tiles shifting.

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