1. PRODUCT NAME
Tech-Mix® Type 1 Tile Adhesive

2. MANUFACTURER
TCC Materials®
2025 Centre Pointe Blvd., Suite 300
Mendota Heights, MN 55120 USA
Phone: 1.651.688.9116
Fax: 1.651.688.9164
Internet: tccmaterials.com
Tech-Mix® is a registered trademark of TCC Materials®

3. PRODUCT DESCRIPTION
Tech-Mix Type 1 Tile Adhesive is a superior strength, high-performance, non-slip, acrylic latex adhesive mastic designed specifically for setting various types of ceramic, glazed and mosaic tile, marble and stone on interior applications. Smooth, easy to apply, non-flammable, off-white in color, Tech-Mix Type 1 Tile Adhesive is not affected by prolonged water contact, but does not form a water-barrier. Apply over TCNA approved surfaces, above, on, or below grade, in the absence of excessive moisture and alkali. The pH levels of concrete should be greater than 5 and less than 9.

FEATURES AND BENEFITS
- Low VOC and low odor
- Non-staining
- Long open-time
- Easy application and clean-up
- Good slip-resistance on vertical surfaces
- Freeze-thaw stable
- Exceeds ANSI A-136.1 requirements for Type 1 specifications

WHEN/WHERE TO USE
- Interior walls, including shower walls, floors, or countertops
- Walls with tile up to 12x12 in. (30 cm)
- Floors with tile up to 8x8 in. (20 cm)
- Commercial and residential use

Suitable tile types:
- Vitreous, semi-vitreous, or non-vitreous ceramic tile
- Porcelain tile
- Mosaic tile

- Quarry tile
- Non-moisture sensitive natural stone*

Note: *All natural stone should be tested to be sure color bleed through does not occur.

Suitable substrates:
- Properly cured and finished concrete, mortar beds, Portland cement plaster
- Masonry cement block (CMU)
- Cement backer units (CBU)
- APA rated exterior exposure 1 plywood or OSB underlayment grade equivalent (interior residential and light commercial dry areas)
- Gypsum plaster or gypsum wallboard (interior dry walls)

SAFETY
READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com or contact TCC Materials at 651-688-9116 (7:30 AM to 4:00 PM, M-F, Central US Time).

CAUTIONS
Read complete cautionary information printed on product container prior to use.

This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered Tech-Mix brand product(s) under normal environmental and working conditions. Because each project is different, TCC Materials cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

4. TECHNICAL DATA
- Meets ANSI A136.1 Type I & II Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>ANSI A136.1 Type 1 Requirement</th>
<th>Typical Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear Strength</td>
<td>28 days, Room Temperature</td>
<td>&gt; 50 psi (0.34 MPa)</td>
</tr>
<tr>
<td>After Accelerated Heat Aging</td>
<td>Type 1 Water Immersion</td>
<td>&gt; 50 psi (0.34 MPa)</td>
</tr>
<tr>
<td>Heat Resistance</td>
<td>Maintains at least 10 lb. (4.5 kg) static load in shear at 120°F (49°C) for 24 hours</td>
<td>Passes</td>
</tr>
<tr>
<td>Impact Test</td>
<td>All tiles remain bonded after impact</td>
<td>Passes</td>
</tr>
<tr>
<td>Stain Test</td>
<td>&lt; 70% penetration</td>
<td>Passes</td>
</tr>
<tr>
<td>Stability in Storage</td>
<td>4 weeks minimum</td>
<td>Passes</td>
</tr>
</tbody>
</table>

Typical Values • Tech-Mix Type 1 Tile Adhesive

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open time</td>
<td>30-45 minutes</td>
</tr>
<tr>
<td>Adjustment time</td>
<td>45 minutes</td>
</tr>
</tbody>
</table>

VOC
<= 58 g/L

AVAILABLE SIZES
- 1 gal. (3.78 L) pail (BOM #120647)
- 3.5 gal. (13.25 L) pail (BOM #120773)
SHELF LIFE
- 12 months from the date of manufacture when stored in the original, unopened container, away from moisture, under cool, dry conditions and out of direct sunlight.
- Do not store in freezing environment, this adhesive is freeze/thaw stable, however, avoid prolonged or repeated freeze thaw cycles. If mastic freezes, allow to thaw at room temperature without stirring.
- Re-seal opened containers by covering with plastic wrap directly on top of the mastic prior to sealing lid to help preserve freshness. For best results, use mastic from opened buckets within 6 months.

5. INSTALLATION

PREPARATION
Read all directions before starting work.
- Ceramic tile installations with Tech-Mix Type 1 Tile Adhesive must conform to ANSI A-108.4 specifications for ceramic tile set with organic mastic.
- All surfaces must be dry, structurally sound, and free of dirt, dust, flaking or peeling paint, soap film, grease, oils, wax, wallpaper adhesive, chemical curing compounds, or any substance or chemical that would interfere with a good bond. Shiny and enamel painted surfaces must be sanded or well scored to insure a bond to the original surface. Do not sand any floors or adhesives that are suspected to contain asbestos.
- Do not use mastic on damp concrete or surfaces that are suspected to contain asbestos.
- Apply when air and substrate temperatures are between 40°F-100°F (4°C-38°C) 24 hours prior to installation, if temperatures fall below 60°F (15°C). Humidity, or if temperatures fall below 60°F (15°C).
- Apply adhesive using the flat edge of the trowel to key into the substrate.
- Apply additional adhesive and comb the surface in one direction using the notched side of the recommended trowel. Apply only the amount of mastic to surface that can be tiled over in 30 minutes. DO NOT SET TILE IF SKIN HAS FORMED ON THE ADHESIVE SURFACE. If skin has formed, remove, and reapply.
- Open time will vary from 30 to 45 minutes, depending on the dryness of the surface, thickness of mastic application, temperature, and humidity, and porosity of the substrate.
- Press the tile into the wet adhesive and move the tiles perpendicularly across the ridges to ensure a good bond. Do not slide tiles against each other. Occasionally remove a tile to insure proper adhesive transfer. Make all alignments and adjustments immediately.
- Tile may be grouted as soon as the mastic is set and the tile cannot be moved (refer to Curing section).

APPLYING
Refer to all tile manufacturer’s guidelines and recommendations to determine that all materials are recommended and can be used with a Type 1 Tile Adhesive.
1. Select a notched trowel with sufficient coverage to ensure proper transfer, covering at least 85% of the back of the tile.
2. Apply adhesive using the flat edge of the trowel to key into the substrate.
3. Open time will vary from 30 to 45 minutes, depending on the dryness of the surface, thickness of mastic application, and porosity of the substrate.
4. Press the tile into the wet adhesive and move the tiles perpendicularly across the ridges to ensure a good bond. Do not slide tiles against each other. Occasionally remove a tile to ensure proper adhesive transfer. Make all alignments and adjustments immediately.
5. Tile may be grouted as soon as the mastic is set and the tile cannot be moved (refer to Curing section).

LIMITATIONS
- Do not use where temperatures will exceed 120°F (48°C).
- Maximum floor tile size is 8 in.x8 in., for larger tiles or if dry time is a concern, use a polymer-modified thinset mortar.
- Not for direct use on strip wood, plastic, wallpaper, glass, metal, fiberglass, Luan plywood, particle board, or OSB panels.
- Not for use over anti-fracture, waterproofing, or polyethylene membranes, sheets, or mats.
- Do not use to install Saltillo tiles, button tiles, button sheeting, or mats.
- Do not use for leveling or in excess of recommended trowel recommendations.
- Do not abut rectified tiles together for proper curing.
- While this product is freeze-thaw stable it is still recommended to protect from freezing.

CURING
- Under normal conditions, 75°F (24°C), tiles may be grouted within 24 hours, full cure takes at least 48-72 hours depending on conditions.
- Minimum dry time for 8 in. (20 cm) tile is 24-72 hours before applying grout. Dry time is extended with larger tiles, when bonding to non-porous surfaces, in high humidity, or if temperatures fall below 60°F (15°C).
- Restrict traffic on floors during the curing time.
- During damp cure of cement grouts, caution should be used to prevent excessive saturation with water of the adhesive during initial cure.

CLEANING
Use a damp cloth to remove any fresh adhesive from tile surfaces. Clean all tools immediately after use in warm soapy water. If mastic has set, remove with mineral spirits (or adhesive remover/stripper) or with a razor blade.
COVERAGE
Approximate coverage rates per gallon:

<table>
<thead>
<tr>
<th>Tile Type</th>
<th>Trowel size and Notch</th>
<th>Coverage per Gallon (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glazed Wall Tile (up to 6&quot;x6&quot;)</td>
<td>3/16&quot; x 5/32&quot; sawtooth (4.8 x 4 mm)</td>
<td>Up to 60 sq. ft. (2.0 m²/L)</td>
</tr>
<tr>
<td>Heavy Tile and Pavers</td>
<td>¼&quot; x ¼&quot; x ¾&quot; Square Notch (6.4 x 6.4 x 9.5 mm)</td>
<td>Up to 40 sq. ft. (1.0 m²/L)</td>
</tr>
<tr>
<td>Ceramic Mosaics and Gauged Slate</td>
<td>⅛&quot; x ⅛&quot; x ⅛&quot; V-notch (3.2 x 3.2 x 3.2 mm)</td>
<td>Up to 80 sq. ft. (2.0 m²/L)</td>
</tr>
<tr>
<td>Wall Tile (6&quot;x6&quot;-12&quot;x12&quot;)</td>
<td>¼&quot; x ¼&quot; x ¾&quot; Square Notch (6.4 x 6.4 x 6.4 mm)</td>
<td>Up to 30 sq. ft. (.75 m²/L)</td>
</tr>
</tbody>
</table>

NOTE: Trowel dimensions are width x depth x spacing. Coverage is approximate and may vary depending on porosity of substrate and the angle at which the trowel is held.

9. TECHNICAL SERVICES
Technical Assistance:
Information is available by calling TCC Materials (hours 7:30 AM to 4:00 PM, M-F, CST):
Phone: 1.651.688.9116
Fax: 1.651.688.6164
Web: tccmaterials.com

Technical and Safety Literature:
To acquire technical and safety literature, please visit our website at: tccmaterials.com.

10. FILING SYSTEM
Division 9
1 Tech-Mix® products can contribute to LEED® credits within the Material Resource, (Recycled Content & Regional Materials) and Indoor Environmental Quality (Low Emitting Materials).

6. AVAILABILITY
To locate Tech-Mix products in your area, please contact:
Phone: 1.651.688.9116
Website: tccmaterials.com

7. WARRANTY
Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller’s liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

8. MAINTENANCE
Not applicable.