

1. PRODUCT NAME

TechPro® Heavy-Duty Stone Veneer Mortar

2. MANUFACTURER

TCC Materials®

2025 Centre Pointe Blvd.

Mendota Heights, MN 55120 USA

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3. PRODUCT DESCRIPTION

TechPro® Heavy-Duty Stone Veneer Mortar is a high-yield, lightweight, high-performance, one-component, Portland cement-based, polymer-modified, fiber-reinforced mortar for adhered installation of large natural stone and manufactured masonry veneer stone. Special admixtures help create both a mechanical and chemical bond to the substrate, significantly outperforming standard mortars. TechPro® Heavy-Duty Stone Veneer Mortar is “Step 2” of the TechPro® stone installation system used to create decorative exterior or non-load bearing interior veneer walls, both above and below grade and is 25% lighter than traditional mortars with excellent handling characteristics.

Features and Benefits

- Excellent workability, non-slump, and non-sag characteristics
- Fiber-reinforced for increased flexural strength and crack resistance
- High-yield with greater coverage than typical mortars, 40 lb. (18.1 kg) bag yields as much as a 50 lb. (22.7 kg) bag of conventional stone veneer mortar.
- Polymer-modified, mix with water only
- Convenient for small or large jobs
- Pre-blended for consistency between batches
- Extended open time
- High bond strength and impact resistance
- Reduces cracking and pop-offs
- Excellent resistance to water penetration and efflorescence
- Meets requirements of ASTM C 1714, ASTM C 270, ANSI A118.4, A118.11, and ISO 13007-C2TES1P1

Uses

- Installing real or manufactured stone veneer units
- Interior or exterior
- Vertical application
- Above and below grade applications

For installation of:

- Natural stone veneer*
- Masonry veneer stone (cast and simulated stone)

* All natural stone should be tested to be sure discoloration by bleed-through does not occur. Not intended for moisture sensitive or resin-backed stone.

For installation over:

- Properly installed TechPro® Polymer-Modified Stone Veneer Base Coat (“Step 1” in TechPro® Stone Veneer System)

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 TechPro® brand product(s) under normal environmental and working conditions. Because each project is different, neither TechPro® nor TCC Materials® can be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

4. TECHNICAL DATA

Open Time at 70°F (21°C)	12 minutes
Adjustability at 70°F (21°C)	10–15 minutes
Bucket Life @ 70°F (21°C)	3–4 hours
Compressive Strength ASTM C-109 (28 days)	2800 psi (19.3 MPa)
Shear Bond A118.4 and A118.11	
Bisque Tile (28 days)	600 psi (4.1 MPa)
Porcelain Tile (28 days)	450 psi (3.1 MPa)
Quarry Tile to Plywood (28 days)	250 psi (1.7 MPa)

Note: Test results obtained under controlled laboratory conditions at 72°F (22°C) and 50% relative humidity. Tested using 6.25 qt. (5.9 L) water per 40 lb (18.1 kg) bag. Reasonable variations can occur due to atmospheric and job site conditions.

4. TECHNICAL DATA (Cont.)

TechPro® Heavy-Duty Stone Veneer Mortar has been tested under laboratory conditions to meet or exceed the following performance standards:

- Meets or exceeds requirements of ASTM C-270 Table 2 for Type S and Type N Mortar
- Meets or exceeds requirements of ANSI A118.4 and ANSI A118.11 American National Standard Specifications for Latex-Portland Cement Mortar

Packaging

- Gray: 40 lb. (18.1 kg) bag (BOM #120444)

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.

5. INSTALLATION

Preparation

Refer to selected stone manufacturers installation instructions for more complete instructions. Install in accordance with all local building code provisions and applicable ASTM standards.

- Stone veneer units must be clean, free from dirt, loose particles, wax, sealers, curing compounds, grease, paint, efflorescence, and any foreign materials that could inhibit adhesion.
- Apply to properly installed TechPro® Polymer-Modified Stone Veneer Base Coat ("Step 1" in TechPro® Stone Veneer System).
- Walls must be plumb and true with square corners, free of movement, and structurally rigid and sound enough to support the veneer finish.
- For best results all materials should be conditioned to 40°F–80°F (4°–27°C) 24 hours prior to installation.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

Mixing

1. Use cool, clean, potable water in the range of 50°–80°F (10°–27°C) for mixing. Always use clean tools and mixing containers. Mix with water only, no bonding additives.
2. Add just enough dry mix to the liquid, begin with 4.25 qt. (4.0 L) water per 40 lb. (18.1 kg) bag. Add additional water sparingly up to 5.0 qt. (4.7 L) total, while mixing 3–5 minutes. Too much water will cause reduced strength.
3. Mix with low speed (150–300 RPM) ½" (13 mm) drill or by hand. Mortar should be a smooth, firm, uniform, lump-free consistency, workable to be trowelable, and stiff enough to retain ridges and peaks when troweled on a horizontal or vertical surface. Avoid high-speed mechanical mixing which can entrap air into the mixture, reducing mortar strength.
4. Let mortar slake/rest for 5–10 minutes, Remix again for 2 minutes and use. Do not add additional powder or liquid after slaking, as this may cause shrinkage and poor bonding. Stir occasionally to keep fluffy. Maintain water and mixing time consistency among batches.
5. Bucket life is approximately 3 to 4 hours, at normal

temperatures of 70°F (21°C). Warmer temperatures will reduce the bucket life. Do not mix more product than can be placed in 3 hours. Mortar shall be used and placed in final position within 3–4 hours after initial mixing or discarded at that time.

Application

Apply only to surfaces that are frost free and between 50°F–90°F (10°C–32°C) within 24 hours of application and 72 hours thereafter. Do not apply in direct sunlight on hot, windy days, or when rain is expected within 24 hours.

- Follow stone veneer manufacturers instructions for layout, installation, and techniques. Stone veneer units can be laid from the bottom of the wall up or top down. Starting at the bottom helps support the weight of the units above, working from the top prevents mortar from spilling on the units below. Corner units should always be installed first.
- Evenly coat or "butter" the back of each stone veneer unit with a ⅛ – ⅜ in. (3.2–9.5 mm) mortar thickness and press firmly into place with a twisting motion until the excess materials extrudes from the sides of the unit. Use enough mortar to achieve 90–100% coverage after placement.
- After pressing the stone into place, the distance from stone to substrate should be approximately ⅛ – ⅜ in. (3.2–9.5 mm).
- Joints between units should be ½ in. (13 mm) or less.
- Once stone veneer units are in place, remove excess extruded Heavy-Duty Stone Veneer Mortar from between units to allow for application of TechPro® Stone Veneer Joint Grout ("Step 3" in TechPro® Stone Veneer System). Do not allow mortar to fill grout lines more than ¼ in. (6.3 mm), an even space between units is desired for grouting and will help the grout color to remain consistent.
- Veneer stones may be adjusted up to 10–15 minutes after placing (at normal temperatures of 70°F (21°C)).
- Work in areas of 5–10 sq. ft. (0.4–0.9 m²) to avoid allowing mortar to dry or skim over before each unit is placed.
- Check mortar for complete coverage periodically by lifting a veneer unit and inspecting the unit and substrate. Mortar coverage for exterior and interior wet applications should be 95%–100%, interior dry areas 80% minimum.
- Shims, spacers, or wedges can be used to temporarily support the units and maintain even spacing. They should be removed once units are set and mortar is thumb print hard.
- Control joints can be installed to mitigate the effects of support movement typically caused by seismic conditions, change in weather, shrinkage and deflection per specifications of project engineer, architect, designer, and local building codes.
- Keep mortar from the unit face during the installation, If on the veneer stone face, do not allow mortar to dry on the unit surface, in most cases, allow the mortar to dry slightly to become "crumbly", then remove with a brush, whisk broom, steel wool, or trowel with a light circular motion. If mortar is removed while very wet, it is likely to smear.
- Allow the stone veneer mortar to cure for a minimum of 12 hours prior to application of grout. Refer to TechPro® Stone Veneer Joint Grout ("Step 3" in TechPro® Stone Veneer System) for proper joint grout application instructions.

Clean up

- Clean all tools with soapy water before mortar dries.

Limitations

- Install in accordance with local building codes and applicable ASTM standards.
- Do not cover expansion joints with mortar.
- Individual stones should be less than 7 lbs. (3.8 kg) each.
- Prevent work from occurring on the opposite side of walls to which the stone veneer is being applied within 48 hours during and after the installation.
- Do not adjust veneer units after mortar takes its initial set or the bond will be permanently broken.
- Do not soak stone or tile.

Curing

Allow 24–36 hours minimum cure time. Strength will increase over the following 28 days. If conditions are very hot, dry, or windy, curing with a gentle mist of water will help prevent premature drying and improve mortar strength. A drape of plastic over the wall will help retain moisture; if the surface begins to appear dry, remove the plastic, mist/moisten the surface and replace the plastic.

Coverage

- 40 lb. (18.1 kg) bag: Approximately 30–33 sq. ft. (2.8–3 m²) of adhered veneer.

6. AVAILABILITY

To locate TechPro® products in your area, please contact:

Phone: 1.651.688.9116
Email: info@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.

9. TECHNICAL SERVICES

Technical Assistance:

Information is available by calling TCC Materials®
(hours 7:30 AM to 4:00 PM CST):

Phone: 1.651.688.9116
Email: info@tccmaterials.com
Web: tccmaterials.com

Technical and Safety Literature:

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

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