



# APPLICATION INSTRUCTIONS

## TREMCO PUMA NOSING SYSTEM

Two-Part, Chemical-Curing,  
High Viscosity PUMA Resin System

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### 1. PURPOSE

- 1.1 The purpose of this document is to establish uniform procedures for applying The Tremco PUMA Nosing System in expansion joint applications as the nosing material for block outs. The techniques involved may require modifications to adjust to job-site conditions.
- 1.2 If you have any questions regarding your application, contact your local Tremco Field Sales Representative for specific design requirements.

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### 2. SCOPE

- 2.1 This document will provide instructions and troubleshooting for the application of The Tremco PUMA Nosing System to qualify for the manufacturer's warranty.

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### 3. POSSIBLE SYSTEM COMPONENTS

- 3.1 Recommended jobsite materials and their use are as follows:
  - a. **Tremco PUMA Primer:** two-part, chemical-curing methyl-methacrylate (MMA) primer for porous and non-porous surfaces.
  - b. **Tremco PUMA Flashing:** two-part, chemical-curing polyurethane methacrylate (PUMA) resin that has higher viscosity allowing for it to be turned into a troweled mixture to create the nosing of the block out.
  - c. **Tremco PUMA Cleaner:** one-part PUMA cleaner for all tools such as mixing paddles, squeegees, spiked rollers and trowels. Always use this cleaner for Vulkem® EWS materials. *Never use any kind of solvent to clean any of your tools as this will cause contamination and inhibit cure.*
  - d. **Tremco PUMA Initiator+:** A reactive catalyst in the form of a white powder used to cure all resins of Vulkem EWS.
  - e. **Aggregate:** 0.3 to 0.6 mm (30-50 mesh)-sized silica sand for the primer application. 0.6 to 1.2 mm (16-30 mesh)-sized silica sand for the nosing mixture. For supplier information, contact Tremco Technical Service.
  - f. **Tremco PUMA Polyethylene Fibers:** manufactured fiber made of polymerized polyethylene units added to Tremco PUMA Nosing to increase the thixotropic characteristics of the resin.

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### 4. AVAILABILITY

- 4.1 Readily available from your local Tremco Field Representative, Tremco Distributor or Tremco Warehouse. Contact your local Tremco Sales Representative, Tremco Distributor, or Customer Service for more information.

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### 5. STORAGE

- 5.1 Store Tremco PUMA materials in original, undamaged packaging in a clean, dry protected location with temperatures between 40 to 86 °F (5 to 30 °C) that will protect from high heat and direct sunlight exposure. Do not store materials near open flame or ignitable materials. For easier handling during application, store Tremco PUMA materials in temperatures between 65 to 75 °F (18 to 24 °C) for 24 hours prior to application.

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### 6. SUBSTRATE PREPARATION

- 6.1 Investigation of the substrate should be performed to determine the type of surface preparation that will need to take place to achieve the appropriate surface profile required for the application.
  - a. Refer to ICRI's Technical Guideline No. 310.2R-2013 - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays and Concrete Repair for best practices on selecting the appropriate method of concrete preparation. Tremco PUMA Nosing application requires a CSP 4.
- 6.2 Concrete shall be water cured and attain a 4000 PSI minimum compressive strength. Moisture content in the concrete must be lower than 6% as measured using a Tramex CME 4 Moisture Meter. Excess moisture in the concrete can prevent the materials from performing as intended. Depending on the concrete construction and job site location, additional concrete testing may be required. Consult a Tremco Technical Service Representative for recommendations.
- 6.3 Concrete surface shall be properly cleaned so that the surface to receive the coating, sealant or liquid applied flashing is free of all laitance, mold, paint, sealers, coatings, curing agents, loose particles and other contamination or foreign matter which

may interfere with the adhesion. Consult a Tremco Technical Service Representative for recommendations prior to installing materials.

- 6.4 In the event of exposed reinforcing steel, it is recommended that the structural engineer of record be contacted for investigation of the condition and for the best method of repair.
- 6.5 Verify existing block out parameters:
  - a. 1.5" depth maximum; if deeper than 1.5" then please contact Tremco Technical Services before proceeding.
  - b. Minimum width of 2.5"; maximum width of 4".

## 7. PRIMING CONCRETE SURFACE

- 7.1 Mix Tremco PUMA Primer for 1 to 2 minutes prior to the addition of Tremco PUMA Initiator+.
- 7.2 Mix Tremco PUMA Primer thoroughly together with Tremco PUMA Initiator+ in accordance with Table 1 for 2 to 3 min.

TABLE 1: TEMPERATURE-USE CHART

TEMPERATURE °F (°C)	GRAMS (OUNCES) INITIATOR+ / GALLON RESIN
68-95 °F (20-35 °C)	50 g (1.76 oz) initiator / gal resin
50-68 °F (10-20 °C)	75 g (2.65 oz) initiator / gal resin
32-50 °F (0-10 °C)	150 g (5.3 oz) initiator / gal resin
14-32 °F (-10-0 °C)	225 g (7.94 oz) initiator / gal resin

- 7.3 Apply Tremco PUMA Primer at a minimum of 90 ft<sup>2</sup>/gal to yield 17 wet mils to the entire area to be coated. The recommended method of application is with a roller. Application below 17 wet mils will result in the primer not curing.
- 7.4 Once primer is rolled out evenly, lightly broadcast 0.3 to 0.6 mm (30-50 mesh)-sized silica sand into the primer at a rate of 0.7 lb/10 ft<sup>2</sup>.
- 7.5 Allow Tremco PUMA Primer a minimum of 30 minutes to fully cure.

## 8. APPLICATION PROCEDURE

- 8.1 Ensure proper structural forming of block out. Practices vary based on applicator.
- 8.2 Mix 1 gallon of Tremco PUMA Flashing to 1.5 gallons of Aggregate (16-18 mesh, clean, dry, silica sand). Use an egg-beater style paddle for mixing this material. Pre-mix for 1 to 2 minutes; cold weather will increase mixing time; warm weather will minimize mixing times.
- 8.3 After pre-mixing add a minimum of 600 mL of Tremco PUMA Polyethylene Fibers to the Tremco PUMA Flashing while the mixer is running; applicator will need to temper consistency to their liking. A minimum of 600 mL up to a maximum of 2400 mL of Tremco PUMA Polyethylene Fibers should be added per gallon of resin.
- 8.4 Continue mixing for 1 to 2 minutes after fiber addition.
- 8.5 The Tremco PUMA Initiator+ to Resin Ratio is a minimum of 50g/gal of resin to a maximum of 225g/gal of resin and is based on the temperature during application. Reference Table 1 above for initiator dosage ranges.
  - a. Mix for 1 to 1.5 minutes. Initiator+ must be added while mixing.
  - b. Split dose addition of initiator in half and mix one half at a time until full dose is added. Mix the 1<sup>st</sup> dose for 30 to 45 second then immediately add the 2<sup>nd</sup> dose and mix for 30-45 seconds.
- 8.6 Pour material into full depth of block out to be filled. Use a mortar or mason's trowel to smooth flush to the existing concrete. Utilize acetone as "trowel grease", strictly for trowel use ONLY, this will prevent material from sticking to trowel.
- 8.7 Allow to fully cure 1 to 2 hours.
- 8.8 Strip formwork. Use a #12 aluminum oxide wheel to grind or smooth the entire inside vertical face of the Tremco PUMA Flashing. This operation should also address any imperfections, fins, etc. that may be on the vertical face of Tremco PUMA Flashing material after stripping the forms. Horizontal surface imperfections should also be ground off in a similar manner.

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## 9. CLEAN UP

- 9.1 Immediately clean all adjacent areas to remove any stains or spills with Tremco PUMA Cleaner before material cures.
- 9.2 Immediately clean tools or equipment with Tremco PUMA Cleaner to remove curing material. Intermittent cleaning during application is recommended.
- 9.3 Clean hands by soaking in hot, soapy water then brush with a stiff bristle brush.

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## 10. LIMITATIONS

- 10.1 Use with adequate ventilation. Do not store in direct sunlight for prolonged periods. Do not thin.
- 10.2 Not for use over expanded polystyrene, extruded polystyrene, poured in place gypsum, lightweight insulated concrete, cementitious wood fiber decks and coal tar pitch.
- 10.3 Substrate must be at least 5 °F (3 °C) above the measured dew point temperatures to avoid dew point conditions. Do not apply in falling precipitation or when precipitation is imminent. Do not apply over contaminated surfaces. All surfaces must be sound, clean, free of standing water and free from contamination.
- 10.4 Any questions regarding drying times, coverage rates and unique application techniques should be directed to Tremco Technical Service or your local Tremco Sales Representative.
- 10.5 Unvented metal pan decks, slab-on-grade and hollow core plank decks require additional qualification prior to application. Please contact Tremco Technical Services for more information.

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## 11. TROUBLESHOOTING

- 11.1 This section describes common industry application issues when certain environmental conditions exist. Below are some commonly seen issues and remedies. If any of these should occur, it is always recommended you contact your local Tremco Sales Representative or Tremco's Technical Service.
- a. When a deck contains too much moisture, the excess moisture may change into a vapor which then condenses at the concrete-membrane interface before the coating has cured, which will cause blisters or bubbles, which, in turn, will interfere with proper adhesion. If this should occur the blisters/bubbles can be cut out, allowing the moisture to escape. After moisture has escaped and the surface is dry, the area can be repaired.
  - b. If the coating is applied in very hot ambient temperatures, the air in the small spaces between the concrete particles increases in volume and forms blisters. Contact Tremco's Technical Service should this occur.
  - c. Tremco PUMA products should only be applied when the UV index is less than 7 and the substrate temperatures are below 115 °F.

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