

INSTALLATION SPECIFICATION TUFCHEM™ II MEMBRANE SPRAY GRADE

1. SCOPE

- 1.1 Storage, handling, mixing, and spray application of Tufchem II Membrane Spray Grade on steel, concrete, and ceramic brick substrates.
- 1.2 This specification does not include primer storage, handling, mixing or application information. Refer to primer product data sheets, installation specifications, Safety Data Sheets, and product labels.

2. MATERIALS

- 2.1 Primers
 - 2.1.1 Concrete substrate: Penntrowel™ Epoxy Primer or Novocoat™ SC1100 Primer/Sealer
 - 2.1.2 Steel substrate: Pennguard™ HP Epoxy Primer
 - 2.1.3 Ceramic brick substrate: Penntrowel Epoxy Primer or Novocoat SC1100 Primer/Sealer
 - 2.1.4 Other substrates, such as titanium alloy or stainless steel: Consult ErgonArmor for recommendations
- 2.2 Membranes. Refer to membrane Product Data Sheets for additional information.
 - 2.2.1 Field: CE-228 Tufchem II Membrane Spray Grade
 - 2.2.2 Details and Repairs: CE-196 Tufchem II Membrane (trowel grade)

3. MATERIAL STORAGE

- 3.1 Store in a dry area, preferably indoors, between 0°F (-17°C) and 100°F (37°C). Product can tolerate short-term exposure to temperatures above or below this range for up to 14 days.
- 3.2 Refer to product data sheets for shelf-life limitations. Refer to Safety Data Sheets and container labels for additional storage information.

4. CONDITIONS

- 4.1 Materials are designed for ideal handling at 70°F and must be between 50°F (10°C) and 90°F (32°C) during mixing and application.
- 4.2 Apply material when substrate and air temperatures are between 50°F (10°C) or above 90°F (32°C).
- 4.3 When applying material, the substrate temperature must be at least 5°F (3°C) above the dew point.

5. MATERIAL INSPECTION

- 5.1 Inspect the part A base prior to use to ensure uniform consistency and appearance.
- 5.2 Do not attempt to mix material in dented pails. Big dents can block the mix blade from reaching the bottom corners of the pail and leave a pocket of uncatalyzed part A base underneath.
- 5.3 Do not use leaking bottles of hardener.
- 5.4 Do not use membrane if there is water on the surface, such as from rain or snow leaking into the pail.

6. MIXING

- 6.1 Tools. Use a heavy-duty 3/4-inch (19 mm), 400 to 600 rpm drill with modified Jiffler Model DC312 mix blade with two 6.5-inch (165 mm) propellers.



ErgonArmor part #29604

- 6.2 Method
 - 6.2.1 While pre-mixing part A and mixing part B into part A, move the mix blade up and down and around in circles, taking care to sweep the sides, bottom, and corners of the pail. Use a timer to avoid shorting mix times. Thorough mixing is critical to disperse the small volume of thin, part B hardener into the large volume of thick, part A base.
 - 6.2.2 Pre-mix part A for one minute prior to adding part B to reduce viscosity.
 - 6.2.3 Open the bottle of part B hardener. While mixing part A base at a speed sufficient to product a vortex in the center of the pail, slowly

pour part B hardener into the center of the vortex, taking at least 45 seconds to empty the bottle.

Material Temperature	Mix Time
Above 70°F (21°C)	3 minutes
50-70°F (10-21°C)	5 minutes

6.3 Material that has begun to set cannot be recovered and should be discarded.

6.4 Clean tools with mineral spirits.

7. APPLICATION TOOLS AND EQUIPMENT

7.1 Tufchem II Membrane Spray Grade is a heavy-bodied mastic designed for industrial airless spray application. The following guidance regarding spray equipment set-up is offered as a starting place and may vary with environmental conditions, equipment arrangement, and local availability.

Mastic Pump Graco Xtreme Airless Pump - X45DH4 (45:1 Fluid to Air Ratio) or X70DH4 (70:1 Fluid to Air Ratio). All pumps should have inlet siphon hose/tube removed. A piece of 1 1/2-inch (38 mm) pipe should be cut and threaded the depth of a 5-gallon pail. Inlet of pump pipe should be submerged in product.

Hydra-mastic Gun Graco Mastic Gun XTR705

Gun Tip XHD001 Housing, XHD543 Tip

Material Hose 50-foot (15 m) x 1/2-inch (13 mm) hose H75050, 2 sections

Above hose sizes depend on length of run anticipated and pump size. 3/8-inch (9 mm) hose to gun is preferred due to more flexibility but gun must be close enough to pump. Temperature may impact hose selection as viscosity is increased in cooler weather. Contact spray equipment manufacturer if in doubt.

Inline Filter None

Air Compressor 150 SCFM (4.25 cubic meter) at 100 psi (6.9 bar)

Air Hose	3/4-inch (19 mm) or 1-inch (25 mm) pump inlet
Air Regulator	3/4-inch (19 mm) minimum size

- 7.2 For small details and touch-up, Tufchem II Membrane Spray Grade may be applied with a brush or roller, or substitute Tufchem II Membrane (trowel grade).

8. APPLICATION METHOD

- 8.1 Apply membrane in a minimum number of passes at 60 to 90 (1.5 to 2.3 mm) per pass to achieve the specified film thickness.
- 8.2 Membrane must be wet to “tacky-wet,” the stage during which the product will leave a black residue on fingers when touched, to form a chemical bond between passes or coats. Build film thickness wet-on-wet. Plan work to avoid top-coating cured material.

- 8.2.1 If membrane is still in the “tacky-wet” stage, it may be top-coated. Following are estimates of the time it will remain tacky enough to topcoat. Good air circulation or direct sunlight will reduce the recoat window.

Air and Substrate Temperature	Estimated Recoat Window
50°F (10°C)	16 hours
70°F (21°C)	4 hours
90°F (32°C)	2 hours

- 8.2.2 If membrane has cured beyond the “tacky-wet” stage, mechanically abrade the surface to remove the gloss and roughen it then wipe it with a clean rag dampened with isopropyl alcohol before top-coating.
- 8.3 When application of the product must be interrupted, feather the last 6 inches (150 mm) of the terminating edge. Follow instructions in article 8.2 regarding over-coating.

9. CURE TIME

Air and Substrate Temperature	Estimated Time to Accept Light Foot Traffic
50°F (10°C)	72 hours
60°F (16°C)	48 hours
70°F (23°C)	24 hours
90°F (32°C)	16 hours

10. INSPECTION AND TESTING

- 10.1 Measure and record wet film thickness in at least 4 random locations for every 100 square feet or 10 square meters.
- 10.2 Test membrane applied over metal substrates for discontinuities in accordance with AMPP SP0188 using a high-voltage holiday detector set to 100 volts per mil (25 µm).
- 10.3 Mark defects, including detected pinholes, damaged areas, thin spots, and other imperfections with chalk.

11. REPAIRS

- 11.1 Abrade the area around the defect in accordance with article 8.2.2.
- 11.2 To repair small defects, reapply membrane with a brush or roller. To reinstall larger damaged areas, reapply membrane using spray equipment.

12. SAFETY PRECAUTIONS / DISCLAIMER

Mixes and applications of this product present a number of hazards. Read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using. While all statements, technical information, and recommendations contained herein are based on information our company believes to be reliable, nothing contained herein shall constitute any warranty, express or implied, with respect to the products and/or services described herein and any such warranties are expressly disclaimed. We recommend that the prospective purchaser or user independently determine the suitability of our product(s) for their intended use. No statement, information, or recommendation with respect to our products, whether contained herein or otherwise communicated, shall be legally binding upon us unless expressly set forth in a written agreement between us and the purchaser/user. For all Terms and Conditions of Sale see ergonarmor.com.

Please contact ErgonArmor for specific recommendations at (877) 982-7667 or +1-601-933-3595.

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