
TECHNICAL INFORMATION

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ERGONARMOR SPECIFICATION FOR INSTALLATION

PENNCOAT® 401 and 401C LINING ON CONCRETE

1. SCOPE

- 1.1 This specification governs the installation of PENNCOAT 401 401C and 401MR Lining Systems on concrete. PENNCOAT 401 is an ambient cured or low temperature forced cured protective lining for concrete, steel and stainless steel surfaces. The application procedures described herein provide the best available information regarding the application of this product for the purpose of ensuring the best possible results when using PENNCOAT 401/401C.
- 1.2 The coating contractor/applicator shall be pre-approved by Corrosion Engineering.
- 1.3 The coating contractor/applicator shall not deviate from these application procedures. In addition, the contractor/applicator shall have a copy of the Application Procedures on the job site at all times.
- 1.4 Contractor shall ensure proper ventilation of the workplaces and furnish proper safety equipment and clothing for each worker using PENNCOAT 401 products. The contractor is also responsible for providing all necessary equipment and scaffolding for surface preparation, application of coating material and removal of dirt, debris and spent abrasives. The contractor or subcontractor is also responsible for supplying all necessary heating equipment.
- 1.5 This application note is specific to concrete substrates; however, PENNCOAT 401/401C can be applied to other substrates. Contact ErgonArmor for details on preparing and coating other substrates.

- 1.6 The theoretical coverage of PENNCOAT 401 is 1,604 ft²/gal/mil (36 m²/liter). PENNCOAT 401 and 401C has a recommended DFT of 14 -16 mils; therefore, at this thickness the theoretical coverage would be 90-103 ft²/gal (2.2 - 2.5m²/liter). However, some coating loss would be expected depending on the surface profile, substrate configuration, environmental conditions, operator technique and method of application. For example, using a 20% loss factor, the practical coverage would be 72-82 ft²/gal (1.8 - 2.0 m²/liter).

2. APPLICABLE SURFACE PREPARATION DOCUMENTS

- 2.1 For applicable standards for the application of PENNCOAT linings on concrete please reference CES 342, section 2.2.

3. MIXING

3.1.2 Mixing Process

2. Mechanically agitate (e.g. with Jiffy Blade) component "A" (resin) until color and consistency is uniform (usually 1-2 minutes)
3. If thinning, slowly add MEK and continue mixing until the thinner is thoroughly mixed (approximately 2-3 minutes). Do not use more than 1 quart (946 ml) of MEK per 5 gallons (19 liters) of resin. Thinning beyond what is specified herein must be approved by Corrosion Engineering.
4. Slowly add component "B" (catalyst) and mix thoroughly for approximately 3-5 minutes. Do not overwork, especially when the resin, catalyst and ambient temperatures are greater than 85°F (29°C).
5. After mixing, pour PENNCOAT 401/401C through a 60 mesh screen into a clean container to remove any large particles.

4. COATING TEMPERATURES AND DRY TIMES

- 4.1 Substrate temperature shall not be less than 60°F (16°C) or greater than 110°F (43°C) and the substrate surface temperature at least 5°F (3°C) above the dew point. Relative humidity shall not exceed 70%. The resin and catalyst temperature should be between 70°F (21°C) and 90°F (32°C).

NOTE: High temperatures will reduce pot life.

4.2 Drying Between Coats

- 4.2.1 PENNCOAT 401 and 401C lining system is applied in 2 coats over suitably prepped and primed concrete.
- 4.2.2 Penntrowel Epoxy Primer shall be applied on accordance with specifications outlined in specification CES-342 and be allowed to dry to touch. After dry to touch has been achieved, the first layer of 401/40C shall be applied over dry primer. Application should begin no longer than 48 hours after the dry to touch stage of the Primer has been achieved.
- 4.4.3 Allow the first coat of 401/401C to dry to touch. Proceed with the second coat within 24 hours after the dry to touch state has been achieved by the first coat.
- 4.4.4 Allow lining to cure for a minimum of 48 hours before placing in to chemical exposure service.

5. THINNERS

- 5.1 PENNCOAT 401/401C coatings may require thinning for certain applications. Thin PENNCOAT 401/401C with MEK only, no other solvents are acceptable.

NOTE: Do not add more than 1 quart (946 ml) of solvent to 5 gallons (19 liters) of coating.

In general, no thinning is required for roll or brush applications; however, some thinning may be required for stripe coating of previously corroded areas or irregular surfaces.

NOTE: MEK is a moderately toxic, flammable liquid. It is important to remember when using any solvent or thinner that adequate ventilation is required, no one should smoke and all individuals using these materials should use a respirator, face shield and wear proper protective clothing. Consult Safety Data Sheets of solvent.

6. REPAIRS AND TOUCH-UPS

- 6.1.1 Obvious defects and pinholes can be repaired with minimum surface preparation. Open pinholes by hand using a small diameter drill bit (about 3/32" diameter). It is not necessary to enlarge pinholes such that bare substrate is exposed. If repairs are made in less than 24

hours, clean area to be touched-up with a clean cloth slightly dampened with clean solvent. Apply coating using a small, clean, stiff bristle brush. Work coating into the opened pinhole using the end of the brush in a twisting and dabbing motion. Lightly brush material over pinhole and a minimum of one inch around the repair site. Coating should be applied thickly but not so thick that sags or runs are produced.

7. SAFETY EQUIPMENT

- 7.1 See Safety Data Sheet (SDS) for handling instructions and health hazard data.

8. SAFETY PRECAUTIONS / DISCLAIMER

- 8.1 Read and follow the hazard information, precautions and first aid directions on the individual product labels and material 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.
- 8.2 Please contact Ergon for specific recommendations at +1-601-933-3000.

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