

***CORROSION ENGINEERING SPECIFICATION FOR
INSTALLATION***

PACMASTIC™ 325 MEMBRANE

1. SCOPE

- 1.1 This specification is applicable for the installation of PACMASTIC 325 Membrane.

2. SURFACE PREPARATION

2.1 Steel:

- 2.1.1 Steel surfaces should be abrasive blasted to a cleanliness level appropriate with the end service of the application. For immersion and vessel linings, prepare substrate in accordance with Steel Structures Painting Council Specification SSPC SP6, NACE #3 or SA #2.

2.2 Concrete:

- 2.2.1 Concrete surfaces should exhibit a minimum surface tensile bond strength of 200 psi (1.4 MPa) when tested in accordance with ACI 503R-89 Appendix A.1. Mechanical methods such as abrasive blasting or scarifying are the preferred methods. Chemical methods such as acid etching and detergents should be utilized to remove latence, oil and grease or when mechanical methods cannot be utilized. Read and follow manufacturer's SDS's and safety precautions when handling these chemicals.

- 2.2.2 Applicable ASTM Standards to be referenced for concrete surface preparation are:

D4258 - Practice for Surface Cleaning Concrete for Coating

D4259 - Practice for Abrading Concrete

D4260 - Practice for Etching Concrete

D4261 - Practice for Surface Cleaning Concrete Unit Masonry for

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Coating

D4262 - Test Method for pH of Chemically-Cleaned or Etched
Concrete Surfaces

D4263 - Test Method for Indicating Moisture in Concrete by the
Plastic Sheet Method

D4285 - Method for Indicating Oil or Water in Compressed Air

3. PRIMER

- 3.1 PACMASTIC 325 can be applied to cleaned steel without use of a primer, provided steel has not been allowed to re-rust after blasting. If the time period between blasting and application is such that steel may re-rust, use PENNGUARD Wash Primer (product data sheet CE-227) on freshly blasted steel.
- 3.1 When used as a stand alone lining PACMASTIC 325 may benefit from use a primer on concrete to minimize out-gassing. This may especially be important in immersion service. Consult Corrosion Engineering data sheet C139 - PENNTROWEL Epoxy Primer for this application.
- 3.2 Since concrete expels air during the day and intakes air during the night, the best time to apply linings is late afternoon or early evening at which time concrete is least likely to expel air. Other precautions such as shading the work area from sunlight to minimize the heating of the substrate will also reduce expulsion of air.

4. TEMPERATURE

- 4.1 Temperature of both the substrate and the material components should be ideally maintained between 50°F and 90°F (10-30°C) for worker comfort and ideal material handling before and during lining installation. As well, surface to be lined must be maintained at least 5 Fahrenheit degrees (2 Celsius degrees) above the moisture dew point. In hot climates, shade the work area.

5. APPLICATION

- 5.1 PACMASTIC 325 is a single component air drying material. There is no catalyst with this material. It can be applied by flat trowel or by spray.
- 5.2 Consult product data sheet for a suggested starting point for spray equipment, if application by spray is the preferred method of installation. However, specific manufacturers of specific spray equipment instructions

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override the suggested starting point outlined on the PACMASTIC 325 product data sheet, and the equipment manufacturer should be consulted for specific details. Equipment part numbers and specifications can change without notice, and Corrosion Engineering is not responsible for specific spray equipment recommendations.

- 5.2 PACMASTIC 325 should be mixed in the pail after opening to reconstitute any solvent that may have separated. If PACMASTIC 325 is too stiff for use, it is suggested to try to add heat to material to thin it. Take appropriate precautions when applying a heat source as PACMASTIC 325 contains solvent. Open flamed heat sources are not suggested if this is required.
- 5.3 PACMASTIC 325 should have the consistency of a medium to heavy creamy paste. Apply PACMASTIC 325 by trowel in 2 coats onto suitably prepared substrate to specified thickness. This will help insure voids are more likely to be eliminated if compared to applying a doubled thickness in a single coat. Be sure all surface areas are completely covered and there are no voids in the PACMASTIC 325 Membrane. Consult project specifications or product data sheet for suggested application thickness and WFT/DFT (wet film thickness/dry film thickness) coverage.
- 5.4 PACMASTIC 325 should be applied in at least 2 layers, “wet to wet”. In other words, the first coat should have achieved sufficient “tack” so as not to slump off when second coat is applied, but still be wet. The amount of time for this will be dependant upon ambient temperature and temperature of material at time of placement, but is usually achieved same day, and within the reach of workers as the job progresses, without having to go back and re-do areas already coated.
- 5.5 If PACMASTIC 325 is to be installed in a application where it will subsequently be covered with a cast or gunited polymer concrete that requires a mechanical anchoring system, the application sequence may vary, dependent upon the substrate.
 - 5.5.1 For steel substrates where anchors are welded in place, the anchors should be first welded in place before application of the PACMASTIC Membrane. Due to the difficulty of subsequently applying the Membrane onto a surface where anchors have already been installed, it is usually preferable to apply the PACMASTIC by spray. Pay particular attention to seal around the base of each anchor. This may require touch up by hand.

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- 5.5.2 On concrete substrates, anchors are typically installed by pre drilling a hole and hammering the anchor in place. This can be done after the installation of the PACMASTIC onto the substrate. Once the anchor holes have been drilled and the anchors set in place, pay particular attention to seal around the base of each anchor by touching up each anchor at the point it penetrates the Membrane. This may (will) require touch up by hand.
- 5.6 If PACMASTIC 325 is to have PTFE film embedded into it, the full thickness applied PACMASTIC 325 should be allowed to air dry a minimum of 24 hours to allow solvent evaporation before embedding film. Ideally the PACMASTIC 325 has achieved the majority of its cure but still retains a slight residual “tack” so as to accept the PTFE film and hold the film in place.
- 5.6.1 PTFE film is delivered in rolls of varying widths, and overlap of seams is usually required. Typically the required overlap of film will be 3.0-4.0" (75-100 mm), or may vary according to specific job specifications.
- 5.6.2 Apply PTFE film by carefully unrolling film off the roll, and embedding into tacky PACMASTIC 325. Film should be firmly pushed into Membrane, and smoothed out with a flat edged tool to remove all wrinkles and blisters as work proceeds, as if applying wallpaper. Care should be taken to not tear PTFE during this step.
- 5.6.3 If “etched one side” film has been specified, be sure film is applied with the correct side facing the PACMASTIC 325. Consult project specification.
- 5.6.4 After measuring and setting overlap of seams as specified in 8.6.1, apply a nominal 100 mil (2.5 mm) thickness of PACMASTIC 325 under the second top layer of film at the overlap, and press the top layer firmly into the membrane to push out any air present in the mastic, and smooth out the seam.
- 5.6.5 PACMASTIC 325, should be allowed to dry sufficiently so as to be tack free and not be disturbed by subsequent application of acid proof brick or polymer concrete linings applied on top of it, if the application so specifies. This length of time will vary depending upon temperature, humidity and air flow, but is usually achieved in 1 - 2 days. If tackiness remains beyond this time and schedule if subsequent work is tight, a very fine inert dust or powder can be *lightly* applied over the tacky membrane to allow workers to proceed.

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6. CLEAN-UP

- 6.1 All mixing equipment, spray equipment, rollers and brushes should be cleaned immediately after use. Solvents recommended for clean-up are methyl ethyl ketone or lacquer thinner. When using these materials read and follow the supplier's safety data sheets.

7. STORAGE AND SHELF LIFE

- 7.1 PACMASTIC 325 Membrane should be stored in a cool, dry, area and out of direct sunlight. PACMASTIC 325 will get thicker over time, but should remain usable for up to 12 months or beyond. If the age of the material is beyond 12 months or is unknown, consult Ergon.

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 ErgonArmor for further questions or for specific recommendations at +1-601-933-3000.

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