

***CORROSION ENGINEERING SPECIFICATION FOR
INSTALLATION***

PACMASTIC[®] 325 MEMBRANE

1. SCOPE

- 1.1 This specification is suitable for the installation of PACMASTIC 325 Membrane and supercedes reference to Specification CES-342 that may be noted on earlier versions of PACMASTIC 325 data sheet CE-249.

2. SURFACE PREPARATION

2.1 Steel:

2.1.1 Steel surfaces should be abrasive blasted to a cleanliness level of SSPC SP6, NACE #3 or SA #2.

2.1.2 Primer on clean and rust free steel is generally not required for PACMASTIC 325, but it is always suggested for concrete to minimize potential for formation of pinholes due to concrete out-gassing. Primer on steel is required in cases where steel may re-rust after blasting when an extended period of time may occur before applying PACMASTIC 325 on freshly blasted steel. There is no specific time during which this may occur, as it is a function of temperature and relative humidity. Common sense shall prevail.

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 of surface preparation. Chemical methods such as acid etching and detergents may be utilized to remove laitance, oil and grease or when

SPECIFICATION FOR INSTALLATION OF PACMASTIC® 325 MEMBRANE
CES-345
10/12 SUPERSEDES 06/12 PAGE 2 OF 5

mechanical methods cannot be utilized. Read and follow manufacturer's MSDS'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 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. APPLICATION OF PACMASTIC 325 MEMBRANE

3.1 PACMASTIC 325 is a single component air drying material. There is no catalyst with this material. It can be applied by flat trowel, heavy "white-wash type" brush, or by spray. Consult product data sheet for a suggested starting point for spray equipment if this is the preferred method of installation. Spray results can vary significantly depending on equipment, air pressure etc and only contractors familiar with spraying of heavy bodied materials should be engaged to achieve successful spray results.

3.2 PACMASTIC 325 should be applied at temperatures between 10°C (50°F) and 30°C (90°F).

3.2 Substrate Priming for PACMASTIC 325: On steel no primer is required for installation of PACMASTIC 325, but consult section 2.1.1 and 2.1.2 of this specification for steel cleanliness before proceeding. Be sure steel does not have time to re-rust after it has been cleaned. This will vary with humidity in the area after the steel has been blasted. Re-rusted steel should be re-blasted. On concrete, use of PENNTROWEL® Epoxy Primer is suggested to minimize out-gassing from the concrete. If used on concrete, PENNTROWEL Epoxy Primer should be dry to touch before proceeding with installation of PACMASTIC 325 Membrane. Do not apply if Epoxy Primer is more than 7 days old. In such cases, scuff up th dry primer and re-prime. Use of PENNGUARD Wash Primer should be considered for steel

SPECIFICATION FOR INSTALLATION OF PACMASTIC® 325 MEMBRANE
CES-345
10/12 SUPERSEDES 06/12 PAGE 3 OF 5

substrates that may re-rust after blasting.

- 3.3 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.
- 3.4 PACMASTIC 325 should have the consistency of a heavy 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 coverage.
- 3.5 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. Subsequent lining work such as guniting or casting of polymer concrete can proceed when a tack-free stage has been achieved. Tack-free is defined as no residual black stain coming off on a finger when the lining is touched by hand.
- 3.6 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.
 - 3.6.1 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.
 - 3.6.2 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

SPECIFICATION FOR INSTALLATION OF PACMASTIC® 325 MEMBRANE
CES-345
10/12 SUPERSEDES 06/12 PAGE 4 OF 5

should be taken to not tear PTFE during this step.

- 3.63 If “etched one side” film has been specified, be sure film is applied with the correct side facing the PACMASTIC 325. Consult project specification.
- 3.6.4 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.
- 3.6.5 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.
- 3.7 If Pacmastic is to be applied over a substrate that will use anchors to hold a subsequent polymer concrete or gunite lining, spray application is suggested. Follow instructions outlined above, paying particular attention to the base of the anchors to insure the anchor is well sealed. Take particular note of the back side of the base of the anchor, and be aware of the potential for “shadowing” which may hide the lack of full sealing at the anchor base. While spray application is preferred to facilitate full anchor coverage, it is acknowledged this may not always be possible. In these cases, use care and thoroughly apply PACMASTIC 325 a with a brush, using a “dabbing” technique to seal the base of each individual anchor. This method is also suitable for touch-ups of spray application.

4. CLEAN-UP

- 4.1 All mixing equipment, spray equipment, rollers and brushes should be cleaned immediately after use. Solvents recommended for clean-up are mineral spirits. When using this materials read and follow the supplier's material safety data sheets.

5. STORAGE AND SHELF LIFE

- 5.1 PACMASTIC 325 should be stored in a cool, dry, area and out of direct sunlight.
- 5.2 Typical Shelf Life of PACMASTIC 325 Membrane is 1 year. Consult section 3.3 of this specification for more detail.

6. SAFETY PRECAUTIONS / DISCLAIMER

- 6.1 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.
- 6.2 Please contact Corrosion Engineering for specific questions or recommendations at +1-610-833-4000 or fax +1-610-833-3040.

www.corrosion-engineering.com