

CE-233
12/13 Supersedes 05/04

PENNTROWEL[®] EPOXY UNDERLAYMENT

DESCRIPTION

PENNTROWEL Epoxy Underlayment is a three-component, 100% solids, epoxy grouting compound. The components are mixed together and used to smooth, repair, or slope concrete slabs. The installed underlayment exhibits excellent physical properties and adhesion.

PENNTROWEL Epoxy Underlayment can be applied in a variety of thicknesses. When resurfacing exceeds two inches, up to 25% coarse silica sand (1/8 - 1/4") may be added. Coarse sand or other aggregates must be dry and free of salt and other contaminants. **Consult Corrosion Engineering specification [CES-232](#) for complete installation details.**

AREAS OF USE

- Repair or patch worn or deteriorated concrete floors, stairs, or pump bases.
- Smooth, level, or slope concrete slabs prior to the installation of Corrosion Engineering lining systems. PENNTROWEL Epoxy Underlayment is compatible with: PENNTROWEL Floor Surfacer Systems, THINSET[®] Adhesive, TUF[®]CHEM[®] Tiling Systems, TUF[®]CHEM II Membrane, PENNTROWEL L/F Systems, and PENNCOAT[®] Membrane/Lining Systems.
- Underlayment for materials normally incompatible with latex-modified, Portland cement-based compounds such as furans and vinyl esters. Consult Corrosion Engineering before using with Furan or Vinyl Ester Systems for additional information.

OUTSTANDING FEATURES

- Higher compressive, tensile, and flexural strength compared to regular sand/ cement mixes.
- Fast strength development - allows for quick installation of subsequent lining system on repaired concrete without costly down time.
- Components are proportioned for easy mixing (Cold Room Hardener may be used for temperatures below 50°F (10°C). Easily applied.
- Excellent adhesion to properly prepared substrates.

TYPICAL PHYSICAL PROPERTIES

PROPERTY	PENNTROWEL Epoxy Underlayment
Wet Underlayment Density	129 lbs / cu ft (2067 kg/m ³)
Required Minimum Cure Time Before Installation of Lining	16-24 hrs - varies with ambient temperature and thickness of lining
Compressive Strength (ASTM C-579)	12 hours >1000 psi (foot traffic) 24 hours 6000-7000 psi (forklift traffic) 7 days 12,000-13,000 psi (ultimate strength)
Tensile Strength (ASTM C-307)	2300 psi
Adhesion to Concrete (ASTM C-321)	Greater than the tensile strength of concrete
Water Absorption (ASTM C-413)	<0.2%
Coefficient of Thermal Expansion (ASTM C-531)	22 x 10 ⁻⁶ /in/in /°F
Shrinkage (ASTM C-531)	<0.10%
Flexural Strength (ASTM C-580)	3100 psi
Mix Ratio, Resin:Hardener:Filler by weight Mix Ratio w/Cold Room Hardener, R:H:F, by wt.	1:0.08:6.8 (10:1 by vol. Resin : Hardener) 1:0.17:6.8 (5:1 by vol. Resin : CR Hardener)

ESTIMATING/PACKAGING THEORETICAL QUANTITIES – NO OVERAGE ALLOWANCE

PRODUCT	CODE	PACKAGING	COVERAGE
PENNTROWEL Epoxy Resin - Gray	19680	4 x 1 gal case (4 x 9.2 lb)	One 290 lb unit (2.25 cu ft) of PENNTROWEL Epoxy Underlayment consists of 5 x 50 bags filler, 1 case resin and 1 case hardener. It will cover 27 SF @ 1" thickness. Up to 1 additional 50# bag of 20-40 mesh quartz sand may be added if a stiffer mix is desired.
PENNTROWEL Epoxy Hardener	19562	4 x 0.75 pt. case (4 x 0.75 lb)	
20-40 Mesh Sand (quartz-based)	27468	5 x 50 lb Bag	

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 [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.



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