Penntrowel™ Epoxy Primer

SELECTION & SPECIFICATION DATA

Type
Epoxy primer

Description
Penntrowel Epoxy Primer is a 2-component, damp surface-tolerant, penetrating epoxy primer for concrete, steel, or ceramic brick substrates.

Features
- Damp surface tolerant
- Penetrating for strong adhesion
- Resistant to many aqueous chemicals, oils, fats, milk products, blood and some solvents.

Uses
- Seal concrete substrates against outgassing to reduce pinholes and blisters in finish coats
- Enhance adhesion of compatible finish coats to steel and concrete substrates
- Saturate reinforcing textile, such as MR chopped strand fiberglass mat
- Binder for mortar paste used to parge-coat abraded concrete or masonry surfaces
- Primer for 7-day old damp, green concrete
- Wet bonding agent between new and old concrete
- Moisture barrier for concrete or masonry

Limitations
Penntrowel Epoxy Primer cured with Epoxy Cold Room Hardener for low temperature use is not moisture or damp surface tolerant. For low temperature applications where moisture tolerance is required, substitute Novocoat™ SC1100 FC Concrete Primer.

SUBSTRATES & SURFACE PREPARATION

All
Substrates must be clean, sound and free of contaminants or standing water.

Steel
Immersion: SSPC-SP 5 White Metal Blast with a minimum angular profile of 3 mils.

Non-immersion: SSPC-SP 6 Commercial Blast with a minimum angular profile of 3 mils. SSPC-SP 2 Hand Tool or SSPC-SP 3 Power Tool Cleaning are suitable for mild environments.

Concrete
Concrete must be cured 7 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with SSPC-SP 13 Surface Preparation of Concrete. Voids in concrete may require filling.

Ceramic Brick or Masonry
Masonry must be clean, sound and neutral pH.

MIXING & THINNING

Ratio
3 parts resin to 1-part Penntrowel Epoxy Primer Hardener by volume, 3.7A: 1B by weight.

5 parts resin to 1 part Epoxy Cold Room Hardener by volume, 6.25A: 1B by weight.

Mixing
Pour one pail of Penntrowel Epoxy Primer Resin into a clean mixing container. Add one container of Penntrowel Epoxy Primer Hardener to resin and power mix for 3 minutes. Thinning not generally required.

For cold cure version, pour Penntrowel Epoxy Primer Resin into a clean mixing container. Measure quantity of Epoxy Cold Room Hardener required according to mix ratio and add it to the resin. Power mix for 3 minutes.

Pot Life
Pot life is shorter at higher temperatures. A larger volume of mixed material will have a shorter pot life than a smaller volume.

Cleanup
Methyl ethyl ketone or xylene

APPLICATION GUIDANCE

Reference Specifications
CES-342 Installation of Penncoat™ Linings

Installation Conditions
Penntrowel Epoxy Primer is formulated for ideal handling at 70°F (21°C). Use when surface, air and material temperatures are between 50°F (10°C) and 80°F (26°C). When temperatures are between 35°F (2°C) and 50°F (10°C), substitute Epoxy Cold Room Hardener. Substrate temperature must be at least 5°F (3°C) above the dew point. Apply to porous substrates as surface temperature is falling to prevent pinholes and blisters due to outgassing.

Roller
Short nap roller with solvent-resistant core

Brush
Stiff bristle scrub brush

CURE TIME

Substrate Temperature	With Penntrowel Epoxy Primer Hardener	With Epoxy Cold Room Hardener
35°F (2°C)	Not applicable	8 hours
50°F (10°C)	16 hours	5 – 6 hours
70°F (21°C)	8 hours	3 – 4 hours
90°F (32°C)	6.5 hours	Not applicable

Cure times will be longer in areas of high humidity or poor air circulation.

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PACKAGING & ESTIMATING

Product	Code	Packaging
Penntrowel Epoxy Primer Kit	19676	4 x 1-gal unit case
Penntrowel Epoxy Primer Resin	19675	3-gal (28 lb) pail
Penntrowel Epoxy Primer Hardener	19699	4 x 1-gal (7.6 lb) can case
Epoxy Cold Room Hardener	29447	2.5-gal (20 lb) jerrycan

A 4-gal unit consists of 4 cans of resin and 4 cans of Penntrowel Epoxy Primer Hardener.

A 16-gal unit consists of 4 x 3-gal pails of resin and 1 case of Penntrowel Epoxy Primer Hardener.

One jerrycan of Epoxy Cold Room Hardener will catalyze 4.5 x 3-gal pails of resin.

Theoretical Coverage

200 - 250 square feet (18.5 - 23.2 m^2) per mixed gallon on concrete

325 - 525 square feet (30.2 - 48.8 m^2) per mixed gallon at 3 - 5 mils on steel

100 square feet (9.3 m^2) per gallon as a saturant for 1-oz. chopped strand fiberglass mat

A gallon of primer mixed with 25-30 lb of Penntrowel L/F Filler-Silica yields about 0.3 cubic feet of resurfacing mortar.

Storage & Shelf Life

Maintain products in original packaging and sealed until ready for use. Estimated shelf life is 18 months when stored in a dry area at 70°F (21°C). Actual shelf life may vary with storage conditions.

If there is any question with respect to the quality of the components, check reactivity prior to use. For assistance consult with ErgonArmor.

SAFETY

Safety

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.

Ventilation

Provide thorough air circulation during and after application until the material has cured when used in enclosed areas.

TYPICAL PHYSICAL PROPERTIES

Property	With Penntrowel Epoxy Hardener	With Epoxy Cold Room Hardener
Solids content	100% by weight	87.7% by weight
Density	8.9 lb/gal	9.1 lb/gal
Viscosity, mixed material	1,200-1,400 cps	250-350 cps
Water absorption, ASTM C413	<1%	<1%
Adhesion		
To concrete	Exceeds concrete tensile strength	Exceeds concrete tensile strength
To brick	Exceeds brick tensile strength	Exceeds brick tensile strength

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