Penntrowel™ Vinyl Ester Primer

SELECTION & SPECIFICATION DATA

Type
Vinyl ester primer

Description
Penntrowel Vinyl Ester Primer is a 2-component, penetrating vinyl ester primer for concrete, steel or masonry substrates.

Features
- Penetrating for strong adhesion
- Resistant to many aqueous chemicals, oils, fats, milk products, blood and some solvents.
- Fast-curing for quick turnaround

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
- Binder for troweled mortars used in MR systems
- Moisture barrier for concrete or masonry

Limitations
Penntrowel Vinyl Ester Primer is moisture sensitive and can flash cure in strong, direct sunlight.

SUBSTRATES & SURFACE PREPARATION

All
Substrates must be clean, dry and free of contaminants.

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 28 days at 75°F (24°C) and 50% relative humidity or have minimum 200 psi tensile strength and pass ASTM D4263 Concrete Moisture Test. Prepare surfaces in accordance with SSPC-SP 13 Surface Preparation of Concrete. Voids in concrete may require filling.

MIXING & THINNING

Ratio
1 gallon Part A resin: 2 - 3 fl. oz. Part B hardener

Mixing
Mix Part A resin with a power mixer to combine the entire contents into a homogenous mixture. Add hardener to resin at a rate of 2-3 fl. oz. per gallon (1.5 to 2.25% by weight) and mix thoroughly using a power mixer. Thinning not generally required.

Pot Life
50°F (10°C) 40 minutes
75°F (24°C) 30 minutes
90°F (32°C) 20 minutes

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 (MEK)

APPLICATION GUIDELINES

Reference Specifications
CES-342 Installation of Penncoat™ Linings

Installation Conditions
Penntrowel Vinyl Ester 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) and substrate temperature is at least 5°F (3°C) above the dew point. Shield work area from direct sunlight. Apply to porous substrates as surface temperature is falling to prevent pinholes and blisters due to outgassing.

Roller
Short nap roller cover with solvent-resistant core.

Brush
Stiff bristle scrub brush.

CURE TIME

SUBSTRATE TEMPERATURE	TACK-FREE, HARD FINISH
50°F (10°C)	7 - 8 hours
70°F (21°C)	3 - 4 hours
90°F (32°C)	2 - 3 hours

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

Penntrowel™ Vinyl Ester Primer

PACKAGING, ESTIMATING & HANDLING

PRODUCT	CODE	PACKAGING
Penntrowel Vinyl Ester Primer Resin	19514	4 x 0.75-gal (6.4 lb) can case
Penntrowel Vinyl Ester Primer Resin	19515	5-gal (43 lb) pail
CHP Hardener	19552	0.75 lb (11.2 fl oz) bottle

A 3-gal unit consists of 1 case of resin and 1 bottle of hardener.

A 5-gal unit consists of 1 pail of resin and 1 bottle of hardener.

Theoretical Coverage

200 - 250 square feet (18.5 - 23.2 m2) per mixed gallon on concrete

250 - 350 square feet (23.2 - 32.5 m2) per mixed gallon at 5 - 6 mils on steel

125 square feet (11.6 m2) per gallon as 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 48 square feet at 1/16" (1.6 mm) thickness.

Storage & Shelf Life

Maintain products in original packaging and sealed until ready for use. Estimated shelf life of resin is 6 months, and hardener is 1 year when stored in a dry area at 70°F (21°C). Warmer resin storage conditions will dramatically reduce shelf life. Store resin between 55°F (13°C) and 65°F (18°C) for maximum shelf life. 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 Armor.

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	VALUE
Solids content	100% reactive
VOC, by weight	<5% Solvent polymerizes during cure.
Density	8.9 lb/gal
Viscosity, mixed material	350-450 cps
Water absorption, ASTM C413	<1%
Adhesion	
• To concrete	• Exceeds concrete tensile strength
• To brick	• Exceeds brick tensile strength
• To steel, 7-day	• 1,200-1,400 psi (8.3-9.6 MPa)

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