

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	<ul style="list-style-type: none"> • Penetrating for strong adhesion • Resistant to many aqueous chemicals, oils, fats, milk products, blood and some solvents. • Fast-curing for quick turnaround
Uses	<ul style="list-style-type: none"> • 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 • 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	<p>Immersion: SSPC-SP 5 White Metal Blast with a minimum angular profile of 3 mils.</p> <p>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.</p>
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 GUIDANCE

Reference Specifications	CES-342 Installation of Penncast 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.

PACKAGING & ESTIMATING

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 m ²) per mixed gallon on concrete
	250 - 350 square feet (23.2 - 32.5 m ²) per mixed gallon at 5 - 6 mils on steel
	125 square feet (11.6 m ²) 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 0.3 cubic feet of resurfacing mortar.

Storage & Shelf Life	
	Maintain products in original packaging and sealed until ready for use. Estimated shelf life of resin is 4 months and hardener is 12 months when stored in a dry area at 70°F (21°C). Storing resin at 40°F (4°C) will significantly extend shelf life. Actual shelf life may vary with storage conditions.
	If there is any question with respect to the quality of the lining 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	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)

Rev 01/2021

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