PRODUCT INFORMATION

CE-243
09/13 Supersedes 06/00

PENNTROWEL® VINYL ESTER L/F SYSTEM

SILICA AND CARBON GRADE

DESCRIPTION

PENNTROWEL Vinyl Ester L/F System is a nominal 1/8"-3/16" multi layer monolithic lining system that offers the benefits of increased strength and chemical resistance by incorporating 10 oz. woven glass mat reinforcement and multiple layer build into the lining. PENNTROWEL Vinyl Ester L/F utilizes a vinyl ester novolac backbone resin for maximum service temperature and chemical resistance. It is packaged with pre-proportioned graded fillers based on either quartz or carbon aggregates (for strong caustic or hydrofluoric acid service).

The system has been formulated to perform in chemical immersion service, and to withstand the various temperature extremes that can be encountered in sumps, trenches, pits and vessels. **For complete installation details, consult Corrosion Engineering installation specification CES 352.**

AREAS OF USE

PENNTROWEL Vinyl Ester L/F System is used both in and out-of-doors to protect concrete and steel substrates from to a wide variety of corrosive agents, including: oxidizing and non-oxidizing acids, salts, oils, (mineral and vegetable) and many alkaline-based cleaners, as well as organic solvents. PENNTROWEL Vinyl Ester L/F System can be specified for use in the following applications:

- trenches
- pits
- vessels
- sumps
- manways
- floors

Note: Use PENNTROWEL Vinyl Ester L/F Carbon System in hydrofluoric acid service.

OUTSTANDING FEATURES

- Excellent physical properties
- Extremely low absorption and shrinkage
- Resists attack from strong oxidizing chemicals
- Reinforcing adds strength, thus reducing the possibility of cracking

TYPICAL PHYSICAL PROPERTIES

PROPERTY	SILICA	CARBON
Wet density, lbs/cu. ft.	115	102
Compressive strength, psi (ASTM C-579)	14,500	20,000
Tensile strength, psi (ASTM C-307)	1,800	2,200
Coefficient of expansion, in./in/°F (ASTM C-531)	1.1×10^{-5}	---------
Shrinkage, (ASTM C-531) @ 28 days	0.2%	0.8%
Modulus of elasticity, psi (ASTM C-580)	1.7×10^{6}	1.05×10^{6}
Flexural strength, psi (ASTM C-580)	3,500	4,800
Service temperature limit (Depending on chemical exposure)	225°F	225°F

ESTIMATING/PACKAGING THEORETICAL QUANTITIES – NO OVERAGE ALLOWANCE

STEP	PRODUCT	CODE	PACKAGING	COVERAGE
Primer	PT VE Primer Resin PT VE Primer Resin CHP Hardener	19514 19515 19552	4 x 0.75 Gal (6.4 lb) cans/case 5 Gal (43 lb) pail 0.7 Pint (0.75 lb) bottle	150 SF/ mixed gal @ 11 mils WFT
	Note: Use 1 bottle CHP Hardener with 4 x.75 gal cans or 1 x 5 gal pail of PT VE Primer Resin			
Silica L/F Base Coat	PT VE Resin CHP Hardener PT L/F Filler	19636 19552 19642	4 x 7.9 lb (0.9 gal) cans/case 1 x 0.75 lb (0.7 pint) bottle 2 x 55 lb bags 142 Lb unit (1.23 cu ft)	A 142 lb unit will cover 236 SF @ 1/16" WFT
Cloth	L/F Reinforcing Mat	19513	38" x 400' (1200 SF) roll	1200 SF/roll
Saturant for cloth	PT VE Resin CHP Hardener	19636 19552	4 x 0.9 gal (7.9 lb) cans/case 0.7 pint (0.75 lb) bottle	400 SF/case
Silica L/F Build Coat	Use same product codes, packaging, and coverages as for Silica L/F Base Coat information above.			
Finish Coat	VE Finishing Solution	19512	1 gal can	250 SF/can
For PENNTROWEL VE L/F Carbon , substitute the following for Base/Build Coat and Cloth layers above				
Carbon L/F Base Coat	PT VE Resin CHP Hardener PT L/F Filler Carbon	19636 19552 29446	4 x 7.9 lb (0.9 gal) cans/case 1 x 0.75 lb (0.7 pint) bottle 2 x 36 lb bag 104 lb unit (1 cu ft)	A 104 lb unit will cover 192 SF @ 1/16" WFT
Carbon L/F Reinforcing Cloth	Nexus ® Veil Reinforcing cloth	21925	48" x 500 yd (6000 SF) roll	6000 SF/roll
Carbon L/F Build Coat	Use same product codes, packaging, and coverages as for Carbon L/F Base Coat information above.			

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.

ErgonArmor TECHNICAL COATING SOLUTIONS®
Corrosion Engineering | 300 Stevens Drive, Suite 310, Lester, PA 19113
+1-610-833-4001 Phone | +1-610-833-3040 Fax | corrosion-engineering.com