



PRODUCT INFORMATION

CE-279
09/13 Supersedes 10/00

PENNTROWEL[®] NOVOLAC L/F LINING SYSTEM **SILICA AND CARBON GRADE**

DESCRIPTION

PENNTROWEL Novolac L/F (Lining/Flooring) System is a multi layer glass mat reinforced monolithic lining system based on premium quality novolac epoxy resins. It offers the benefits of increased strength, chemical resistance, excellent tensile properties, and resistance to cracking by incorporating a glass mat reinforcement and multiple layer build.

The system has been formulated to perform in chemical immersion service, and will withstand the various temperature extremes that can be encountered in sumps, trenches, pits and vessels. Take care when ordering, to specify the correct product components by checking the product codes listed under the estimating and packaging section. **Consult Corrosion Engineering specification [CES-352](#) for complete usage/installation details.**

AREAS OF USE

PENNTROWEL NOVOLAC L/F is used to protect concrete and steel substrates in continuous immersion service such as trenches, pits, vessels, sumps, manways, and floors that are subject to a wide variety of corrosive agents. These include: mild oxidizing and non oxidizing acids, salts, oils, (mineral and vegetable) and many alkaline-based cleaners, as well as organic solvents. It is suitable for both interior and exterior applications.

Note: For use in chemical service where a novolac epoxy is required and there is also the presence of hydrofluoric acid, utilize the optional PENNTROWEL Carbon Filler. A substitution of the glass reinforcing with a synthetic veil is also required. Consult your Corrosion Engineering representative for complete details.

OUTSTANDING FEATURES

- Excellent physical properties - low absorption and shrinkage..
- Reinforcing adds strength thus reducing possibility of cracking.
- Resistant to 98% sulfuric, 37% hydrochloric, and 20% concentrations of nitric acid, and organic solvents including toluene, butyl acetate and trichlorethylene.

TYPICAL PHYSICAL PROPERTIES

| PROPERTY | SILICA | CARBON |
|--|-------------------------------|------------------------|
| Wet Density, lbs/cu ft | 113 | 104 |
| Compressive Strength, psi (ASTM C-579) | 16,000 | 16,500 |
| Tensile Strength, psi (ASTM C-307) | 2,500 | 3,000 |
| Coefficient of Expansion, in./in/°F (ASTM C-531) | 3.28 x 10 ⁻⁵ | 3.5 x 10 ⁻⁵ |
| Shrinkage, (ASTM C-531) | 0.05% | 0.04% |
| Modulus of Elasticity, psi (ASTM C-580) | 9.4 x 10 ⁵ | 7.0 x 10 ⁵ |
| Flexural Strength, psi (ASTM C-580) | 5,500 | 6,000 |
| Mix Ratio - Resin : Hardener : Filler | 1.0 : 0.51 : 3.5 | 1.0 : 0.51 : 2.3 |
| Service Temperature Limit (Depending on chemical exposure) | 180 - 220°F | 180 - 220°F |
| Work Life/Set Time @ 70°F | 25 - 35 minutes / 3 - 4 hours | |

ESTIMATING/PACKAGING THEORETICAL QUANTITIES – NO OVERAGE ALLOWANCE

| STEP | PRODUCT | CODE | PACKAGING | COVERAGE |
|--|---|-------------------------|---|--|
| Primer | PT Epoxy Primer | 19676 | 4 x 1 gal units/case | 600 SF/case (150 SF/ gal) @ 11 mils WFT |
| Silica L/F Base Coat | 6710 Resin 6711 Hardener L/F Filler - Silica | 19591 19593 19642 | 4 x 7.8 lb (0.8 gal) cans/case 4 x 4.0 lb (0.5 gal) cans/case 2 x 55 lb bags 157 lb unit (1.4 cu ft) | 267 SF @ 1/16" WFT per 157 lb unit |
| Cloth | L/F Reinforcing Mat | 19513 | 38" x 400' (1200 SF) roll | 1200 SF/roll |
| Saturant for cloth | 6710 Resin 6711 Hardener | 19591 19593 | 4 x 7.8 lb (0.8 gal) cans/case 4 x 4.0 lb (0.5 gal) cans/case | 520 SF per 4 x 11.8 lb (1.3 gal) units |
| Silica L/F Build Coat | Use same product codes packaging and coverages as for Base coat information above. | | | |
| For PENNTROWEL Novolac L/F Carbon Grade, substitute the following for Base Coat /Cloth layers above | | | | |
| Carbon L/F Base Coat | 6710 Resin 6711 Hardener L/F Filler - Carbon | 19591 19593 29446 | 4 x 7.8 lb (0.8 gal) cans/case 4 x 4.0 lb (0.5gal) cans/case 2 x 36 lb bags 119 lb unit (1.15 cu ft) | A 119 lb unit covers 228 SF @ 1/16" WFT |
| Reinforcing Mat for Carbon Grade | Nexus® Veil (for carbon grade system) | 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.



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