

*CE-277
11/13 Supersedes 08/04*

PENNCHEM[®] NOVOLAC CONCRETE

DESCRIPTION

PENNCHEM Novolac Concrete is a premium quality silica filled novolac resin based thermosetting polymer concrete. It is formulated to be applied by the casting method of placement. PENNCHEM Novolac Concrete may be cast into formwork or placed as a monolithic topping on conventional Portland cement concrete surfaces. It provides a dense granite-like surface with a compressive strength much greater than Portland cement concrete and is resistant to high concentrations of many chemicals at elevated temperatures in service usually associated with acid - resistant brick and mortar construction. PENNCHEM Novolac Concrete is grey in color. **For complete installation instructions, consult Corrosion Engineering installation specification [CES-360](#).**

AREAS OF USE

PENNCHEM Novolac Concrete can be used as a less expensive alternative to chemically resistant brick in many applications.

PENNCHEM Novolac Concrete offers increased chemical, thermal, and mechanical resistance compared to thinner resin based monolithic toppings such as epoxies and polyesters. PENNCHEM Novolac Concrete can be cast in a wide variety of applications such as floor overlays, pump pads, tank foundations, sumps, trenches and curbing. PENNCHEM Novolac Concrete can be used to renovate existing chemically deteriorated concrete floors or be applied to new concrete

OUTSTANDING FEATURES

- Low porosity.
- High compressive strength.
- Resistant to concentrated sulfuric and hydrochloric acid as well as excellent solvent resistance. Resistant to nitric acid to 25% concentration.
- Components are proportioned for easy mixing
- Low shrinkage.
- Non combustible when cured.
- Can withstand temperatures up to 200°F.
- Easy to place and finish.

TYPICAL PHYSICAL PROPERTIES

PROPERTY	PENNCHEM Novolac Concrete
Color	Concrete grey
Working life (hours)	45 - 60 minutes @ 70°F
Density (ASTM C-138)	136 lbs per cu ft
Compressive strength (ASTM C-579) (7 days)	>14,500 psi (100 MPa)
Tensile strength (ASTM C-190) (28 days)	>2,000 psi (13.8 MPa)
Absorption, (ASTM C-413) (48 hour immersion)	0.05 %
Linear shrinkage, (ASTM C-531)	0.04 %
Coefficient of thermal expansion (75°F-210°F) (ASTM C-531)	1.95 x 10 ⁻⁵ in./in./°F
Modulus of elasticity, psi. (ASTM C-580) (28 days)	1.84 x 10 ⁶
Mix ratio (by wt.) - Filler to combined resin/hardener	8.6:1.0:
Maximum service temperature	200°F

ESTIMATING/PACKAGING THEORETICAL QUANTITIES – NO OVERAGE ALLOWANCE

PRODUCT	CODE	PACKAGING	MIX RATIO
6710 Resin	19592	40 lb (4 gal) pail	A 586 lb (4.3 cu ft) unit consists of 1 x 40 lb pail resin, 1 x 21 lb can hardener, and 7 x 75 lb bags of filler. Packages may be split for partial pours, by maintaining similar ratios. The above mix will yield a resinous concrete with a closed surface. Use of vibration during placement will allow addition of 1 additional bag of filler to increase yield to 661 lbs (4.86 cu ft) As a castable topping, allow 22.67 mixed lbs per SF @ 2" thickness, and 17 mixed lbs per SF @ 1.5 " thickness.
6711 Hardener	19595	21 lb (2.5 gal) can	
Polymer Concrete Filler	19670	75 lb bag	

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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