Penntrowel™ Novolac SB/SBR Flooring System

SELECTION & SPECIFICATION DATA

Type

Novolac epoxy floor surfacer

Description

Penntrowel Novolac SB Flooring System is a ¼" (6 mm) high functional novolac epoxy flooring system for severe chemical service applications. Meets or exceeds ASTM C722 types A and B for chemical resistant monolithic surfacings. It is applied by the slurry/broadcast method for fast installation.

The optional Novolac SBR system variant incorporates a 1 oz. mat reinforcement into the primer layer for additional resistance against substrate crack propagation. A topcoat may be applied onto the finished base layer for varying aesthetics. A suitable aggregate can be broadcast into the topcoat to achieve a non-slip finish.

Uses

- Process area floors
- Chemical plant floors
- Tank farms
- Truck unloading pads
- Floors
- Pump pads
- Tank foundations

Features

- High build thickness resists mechanical abuse
- High functional novolac epoxy resin system for maximum chemical resistance
- Resistant to most acids, alkalis and aliphatic solvents
- Dense graded filler blend, no sealing or topcoat required
- Easy to apply by slurry/broadcast method
- Conveniently proportioned, easy-to-use
- Optional cold room hardener allows curing as low as 40°F (4°C)

Limitations

Not for use beyond its chemical resistance capabilities. Consult Armor with specific questions.

INSTALLATION GUIDANCE

Reference Specifications

CES-294 Specification for Penntrowel SB/SBR Surfacers installation

Installation Conditions

Materials and substrate should be acclimated to the air temperature prior to installation. The air temperature should be between 50°F (10°C) and 90°F (32°C) during installation and cure. Installation temperature requirements can be lowered by using optional Cold Room Hardener.

Mixing/Use

Mix ratio Filler:Resin:Hardener is 7.5:1.0:0.53 by weight. Empty Part A resin and Part B hardener into a clean mixing vessel and mix thoroughly using a slow speed drill with suitable blade mixer such as a Jiffler. Mix for 2 minutes minimum to insure full blending. Slowly add Part C filler until fully wetted out. Pour mixed material onto substrate and smooth into place with a flat trowel over properly primed and prepared substrate at a nominal 3/16" (4.9 mm) thickness. Use of guide strips to maintain uniform thickness is suggested. Immediately seed to excess with a dry inert filler. Allow to cure per cure time information below before applying optional topcoat to seal surface if desired. Allow to fully set before putting into service.

When the Novolac SBR version is specified, apply a neat coat of catalyzed resin onto the cured primer. Embed the 1 oz mat into the wet resin. Apply additional neat catalyzed resin saturant onto the mat reinforcement. Spread evenly and use a serrated roller to eliminate bubbles and wrinkles. Use smaller pieces of mat for corners and intricate work. Allow mat reinforcing layer to set hard. Once cured apply the Penntrowel Novolac SB build coat following mixing and usage instructions as described above.

Work Life

30-40 minutes at 70°F (21°C)

Cleanup

MEK or xylene

CURE TIME

Temperature	Initial Set	Full Cure
70°F (21°C)	Foot traffic 6-8 hours Light vehicle traffic 18 hours	24 hours

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.

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PACKAGING & ESTIMATING

Product	Code	Packaging
Resin	19592	40 lb/18.1 kg (4.0 gal/15.1 l) pail
Hardener	19595	21 lb/ 9.5 kg (2.5 gal/9.5 l) pail
Tufchem™ Grout Filler	21931	60 lb (27.2 kg) bag
1 oz. reinforcing mat	19639	50 in. x 375 ft (1500 sf/139 sm) roll

Theoretical Coverage

A 361 lb/3.1 cu ft (164 kg/88.9 l) unit consists of 1 pail of resin, 1 pail of hardener and 5 bags of filler and will cover 195 sf (18.1 sm) at 3/16″ (4.8 mm) thickness. Finished thickness will be a nominal ¼″ (6 mm) after aggregate seeding.

Neat topcoat consists of 1 pail of resin and 1 pail hardener, yielding 6.5 mixed gallons (24.6 l). Theoretical of the topcoat is 1300 sf (121 sm) per 6.5-gallon (24.6 l) unit when applied at 8 mils (200 µm) thickness.

When neat resin and hardener is mixed and used as a saturant for the 1 oz. mat reinforcing layer allow 650 sf (60.4 sm) per 6.5-gallon (24.6 l) unit.

Storage & Shelf Life

Maintain products in original packaging and sealed until ready for use. Estimated shelf life of components is 18-24 months when stored in a dry area at 70˚F (21˚C). 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.

TYPICAL PHYSICAL PROPERTIES

Property	Typical Value
Color	Gray, special colors on request
Wet density	115 lb/ft^3 (1,842 kg/m^3)
Compressive strength, 7-day, ASTM C579	>10,000 psi (69 MPa)
Flexural strength, ASTM C580	>2,500 psi (17.2 MPa)
Bond to concrete, ASTM C321	Exceeds tensile strength of concrete
Water absorption, ASTM C413	<0.1%
Shrinkage, ASTM C531	<0.1%
Coefficient of thermal expansion, ASTM C531	1.7 x 10^{-5}/°F (3.1 x 10^{-5}/°C)
Heat resistance, ASTM C884 modified	200°F (93°C) continuous

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