



Penntrowel™ 250SB/250SBR Surfacers

SELECTION & SPECIFICATION DATA

Type	High performance epoxy floor surfacer
Description	Penntrowel 250 SB Surfacers is a ¼" (6 mm) heavy duty floor topping for severe temperature and thermal shock 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 250SBR system variant incorporates a 1 oz. mat reinforcement into the primer layer for additional resistance against substrate crack propagation. A top coat may be applied into the finished base layer for varying aesthetics. A suitable aggregate can be broadcast into the topcoat to achieve a non-slip finish.
Uses	<ul style="list-style-type: none">• Process area floors• Food processing and chemical plant floors• Tank farms• Truck unloading pads• Floors pump pads tank foundations, truck unloading pads• High build thickness resists mechanical abuse
Features	<ul style="list-style-type: none">• Can withstand intermittent exposures to 250°F (121°C)• Remains structurally sound in repeated thermal cycling from ambient to 190°F (88°C)• High performance flexibilized epoxy resin system for maximum temperature and thermal shock 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 mix kits• Optional cold room hardener to allow 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 Specification	CES-294 Specification for Penntrowel 250SB/250SBR 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 with optional Cold Room Hardener.
Mixing/Use	<p>Mix ratio Filler:Resin:Hardener is 6.4:1.0:0.42 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 Jiffiler. 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.</p> <p>When the 250SBR 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 250SB build coat following mixing and usage instructions as described above.</p>
Work Life	45-60 minutes at 70°F (21°C)
Cleanup	Mineral spirits

CURE TIME

Temperature	Initial Set	Full Cure
70°F (21°C)	Foot traffic 4.5 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	19635	47 lb/21.3 kg (5.0 gal/18.9 l) pail
Hardener	19633	20 lb/ 9 kg (2.5 gal/9.5 l) pail
Tufchem™ Grout Filler	21931	60 lb (27.2 kg) bag
Theoretical Coverage	<p>A 367 lb/3.2 cu ft (166 kg/90.6 l) unit consists of 1 pail of resin, 1 pail of hardener and 4 bags of filler and will cover 198 sf (18.4 sm) at 3/16" (4.8 mm) thickness. Finished thickness will be a nominal 1/4" (6 mm) after aggregate seeding.</p> <p>Neat topcoat consists of 1 pail of resin and 1 pail hardener, yielding 7.5 mixed gallons (28.4 l). Theoretical coverage of the topcoat is 1500 sf (139 sm) per 7.5-gallon (28.4 l) unit when applied at 8 mils (200 µm) thickness.</p> <p>When neat resin and hardener is mixed and used as a saturant for the 1 oz. mat reinforcing layer allow 750 sf (69.7 sm) per 7.5-gallon (28.4 l) unit.</p>	
Storage & Shelf Life	<p>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.</p> <p>If there is any question with respect to the quality of the components check reactivity prior to use. For assistance consult with Armor.</p>	

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	>3,000 psi (20.7 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	190°F (88°C) continuous 230°F (110°C) intermittent

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