



Tufchem™ XF Polymer Concrete

SELECTION & SPECIFICATION DATA

Type	Epoxy polymer concrete
Description	Tufchem XF Polymer Concrete is a versatile, 3-component epoxy polymer concrete designed with high flow characteristics for casting applications between 1 inch (25 mm) and 12 inches (300 mm) deep.
Uses	<ul style="list-style-type: none">• Polymer concrete pours with heavy reinforcing• Polymer concrete pours with tight formwork• Beams, columns, curbs and piers• Precast structures, shapes and assemblies• Deep-pour, tight access structural machine base grout• Tight clearance grouting behind anchored thermoplastic liners for trench and sump refurbishments
Features	<ul style="list-style-type: none">• High slump formulation to maximize flow• Proportioned components for easy mixing• Low exotherm allows deep pours up to 12 inches (300 mm) without overheating• Easy to place and finish• Good resistance to a broad range of chemicals
Limitations	<ul style="list-style-type: none">• Requires formwork.• Not for use beyond its chemical resistance or thermal capabilities. Consult Armor with specific questions

INSTALLATION GUIDANCE

Reference Specifications	CE-360 Installation of Armor Resinous Polymer Concretes
Installation Conditions	<p>Tufchem XF Polymer Concrete is formulated for ideal handling at 70°F (21°C). Materials and substrate should be acclimated to the air temperature prior to installation, and the air temperature should be between 50°F (10°C) and 90°F (32°C) during installation and cure.</p> <p>For temperatures between 35°F (2°C) and 50°F (10°C), substitute Tufchem Epoxy Hardener with Epoxy Cold Room Hardener in accordance with product data sheet CE-159 Epoxy Cold Room Hardener.</p> <p>Substrate must be clean, dry and neutral pH.</p>
Ratio	By weight, 1.0 resin: 0.17 hardener: 9.5-9.9 filler or 1.0-part mixed resin and hardener: 8.2-8.5 parts filler
Mixing	Pour measured quantity of resin into clean dry mixing vessel. Slowly add measured quantity of hardener to resin and power mix thoroughly. Add filler and power mix until filler is thoroughly wetted.
Work Life	<p>2 hours at 70°F (21°C)</p> <p>Work life is shorter at higher temperatures. A larger volume of mixed material will have a shorter work life than a smaller volume.</p>
Cleanup	Xylene or MEK

CURE TIME

Temperature	Initial Set	Full Cure
70°F (21°C)	8 hours	5 days

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 & HANDLING

Product	Code	Packaging
Tufchem Epoxy Resin, Gray	19704 19712	47 lb (21.3 kg) pail 500 lb (227 kg) drum
Tufchem Epoxy Resin, Red	29656	47 lb (21.3 kg) pail
Tufchem Epoxy Resin, Blue	29657	47 lb (21.3 kg) pail
Tufchem Epoxy Hardener	19705 29554 19713	7.8 lb (3.5 kg) can 23.4 lb (10.6 kg) can 435 lb (197 kg) drum
Polymer Concrete XF Filler	23475	50 lb (22.7 kg) bag
A 3.83 cubic foot (506 lb) unit consists of 1 x 47 lb pail resin, 1 x 7.8 lb can hardener, and 9 x 50 lb bags filler at 1.0-part mixed resin and hardener to 8.2 parts filler by weight.		
A 11.9 cubic foot unit (1,564 lb) consists of 3 x 47 lb pails resin, 1 x 23.4 lb cans hardener, and 28 x 50 lb bags filler at 1.0 parts mixed resin and hardener to 8.5 parts filler by weight.		
Above mix ratios are rounded to match standard package sizes. For larger pours using bulk packaging, maintain a ratio of 1.0-part resin to 0.17 parts hardener to 9.5-9.9 parts filler or 1.0-part mixed resin and hardener to 8.2-8.5 parts filler by weight.		
Theoretical Coverage	Allow 132 mixed lb/ft ³ (2,114 kg/m ³) of volume. When casting in a 2-inch (50 mm) thickness, allow 22 mixed lb/ft ² (108 kg/m ²). For a 3-inch (76 mm) casting, allow 33 mixed lb/ft ² (161 kg/m ²) Normal wastage allowances should be added.	
Storage & Shelf Life	Maintain products in original packaging and sealed until ready for use. Estimated shelf life is 12 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. Blue and red available subject to order minimums.
Density, ASTM C138	132 lb/ft ³ (2,114 kg/m ³)
Compressive strength, ASTM C579	>15,000 psi (103 MPa)
Tensile strength, ASTM C307	>1,500 psi (10.3 MPa)
Shrinkage, ASTM C531	0.14%
Absorption, ASTM C413	0.33%
Minimum application thickness	1.0 inch (25 mm)
Slump using 8.2-8.5 filler: 1.0 mixed resin and hardener mix ratio	Approximately 8 inches (200 mm). Flow characteristics of resinous polymer grouts are different from Portland cement grouts. Caution should be used when comparing estimated slump values.

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