

TUFCHEM™ Silicate Concrete - Trowel Grade

SELECTION & SPECIFICATION DATA

Type	Inorganic potassium silicate polymer topping
Description	Tufchem Silicate Concrete – Trowel Grade is a 2-component inorganic potassium silicate polymer topping. It is formulated to be installed at a minimum thickness of 0.75 inches (19 mm).
Uses	<ul style="list-style-type: none"> • Acid-resistant concrete topping • Flooring • Horizontal repair mortar for Tufchem Silicate Concrete - Foundation Grade or Tufchem Silicate Gunite flooring
Features	<ul style="list-style-type: none"> • Holds 2% slope • Lower minimum application thickness than Tufchem Silicate Concrete – Foundation Grade or Tufchem Silicate Gunite • Fresh mortar cleans up with water
Limitations	<ul style="list-style-type: none"> • Not resistant to alkaline or caustic solutions. It is not resistant to hydrofluoric acid, or for use beyond its chemical resistance or thermal capabilities. • Tufchem Silicate Concrete - Trowel Grade should not be used in areas that are continuously wet. • Not suitable for vertical or overhead applications. • Consult ErgonArmor with specific questions.

INSTALLATION GUIDANCE

Reference Specifications CES-340 ErgonArmor Specification for the installation of Tufchem Silicate Concrete - Trowel Grade

Installation Conditions Tufchem Silicate Concrete – Trowel Grade is formulated for ideal handling at 70°F (21°C). Do not use below 50°F (10°C).

Ratio 1.0 part solution: 6.0 parts powder by weight

Ratio may be adjusted slightly to suit applicator's handling preferences.

Mixing Pour measured quantity of solution into a clean, dry mixing vessel. Slowly add measured quantity of powder to solution and power mix until thoroughly wetted.

The mix ratio of Tufchem Silicate Concrete – Trowel Grade can be varied from 5.75:1 to 6.25:1 Powder to Solution by weight to adjust handling properties as desired. Consult CES-340 for full details.

To maximize adhesion to Portland cement concrete, apply Tufchem Silicate Solution as a primer and cast Tufchem Silicate Concrete-FG over it before the primer is allowed to dry.

Work Life
 40 - 60 minutes at 50°F (10°C)
 30 - 40 minutes at 70°F (21°C)
 15 - 30 minutes at 90°F (32°C)

Cleanup Water

CURE TIME

Temperature	Initial Set	Foot traffic	Full Cure
70°F (21°C)	30-45 minutes	16 hours	28 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 Silicate Solution	19546	44 lb (20 kg) pail
Tufchem Silicate Concrete Trowel Grade Powder	19551	53 lb (24 kg) bag

A 309 lb (140 kg) unit consists of 1 x 44 lb (20 kg) pail of solution and 5 x 53 lb (24 kg) bags of powder. A unit will yield 2.24 ft³ (0.6 m³).

Theoretical Coverage 8.75 mixed lb per ft² at 3/4 in. thickness. (43 kg per m² at 19 mm thickness).

Storage & Shelf Life Maintain products in original packaging and sealed until ready for use. Estimated shelf life is 18 months when stored in a dry area at 70°F (21°C). Cover powder during storage to maximize shelf life. 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 ErgonArmor.

TYPICAL PHYSICAL PROPERTIES

Property	Typical Value
Color	Charcoal gray
Density, ASTM C138	138 lb/ft ³ (2,210 kg/m ³)
Compressive strength, ASTM C579,	
1-day	>2,250 psi (15.5 MPa)
3-day	>3,600 psi (24.8 MPa)
28-day	>4,000 psi (27.6 MPa)
Tensile strength, ASTM C190, 28-day	>590 psi (4 MPa)
Flexural strength, ASTM C580, 28-day	>900 psi (6.2 MPa)
Absorption, ASTM C413, 48-hour immersion	5.6%
Shrinkage, ASTM C531, 28-day	0.3%
Adhesion to: Clean primed concrete	250 psi (1.7 MPa)

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TERMS AND CONDITIONS OF SALE

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