FasTrac Structural Shotcrete

FIBER-REINFORCED SHOTCRETE

Technical Data Sheet

PRODUCT DESCRIPTION

FasTrac Structural Shotcrete is a fiber reinforced, wet or dry process shotcrete material that can be installed from ½-inch to full design thickness. FasTrac Structural Shotcrete is silica fume modified, and corrosion inhibitor enhanced for long term durability.

APPLICATIONS

- Tunnels
- Dams
- Culverts
- Walls

FEATURES

- Fiber-Reinforced
- Silica Fume Modified
- Low Modulus
- Wet or Dry Process

SURFACE PREPARATION

Condition surfaces to between 40°F and 90°F (°4.4 C and 32°C) for best results. Mechanically prepare concrete surfaces to a Concrete Surface Profile (CSP) of 5 to 10 in accordance with ICRI Technical Guideline 310.2R. Remove all loose, broken or unsound material and all bond inhibiting contaminants. Presoak concrete surfaces for 1 to 2 hours prior to installation. Substrate should be saturated surface dry (SSD) prior to installation. Rebar should be free of all rust, oxidation and loose scale.

MIXING

Wet Process: Mix FasTrac Structural Shotcrete with approximately 2.5 quarts water per 50 lb. (22.7 kg) in a mortar mixer. Water content may be lowered (for overhead work) or increased for congested rebar applications. Do not exceed 2.8 quarts water 50 lb. (22.7 kg) bag. Add water to mixer followed by repair material. Mix for 3 to 4 minutes. Adjust water content as necessary. Use immediately after mixing.

Dry Process: Pre-dampen dry powder in mortar mixer with just enough water to suppress dust prior to placement into gun or with a pre-hydration water ring equipped with a screen to avoid plug-ups. Avoid over dampening material. Adjust consistency at nozzle.

INSTALLATION

A test panel can help ensure proper water content and finishing time under job site conditions.

Place to full design thickness whenever possible. Overhead placement is applied in layers just thick enough to prevent sagging. Direct nozzle perpendicular to surface and rotate in a series of circular patterns, filling all inside corners first. FasTrac Structural Shotcrete should emerge from the nozzle in a uniform, uninterrupted flow. Finish to desired texture with screed, float, trowel, or brush. For more detailed application procedures, refer to ACI 506R-90, Guide to Shotcrete Report.

CURING

Wet cure all surfaces with FasTrac Curing Compound immediately after placement.

CLEAN UP

Clean all tools and equipment immediately after use with clean water a detergent.

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COVERAGE AND YIELD

50 lb. (22.7 kg) bag will cover approximately 9 sq.ft. at ½-inch thickness depending upon final water content.

SHELF LIFE AND STORAGE

Shelf life: 1 year from date of manufacture when stored in dry weatherproof conditions.
Storage Temperatures: 40° F (4.4°C) to 95° F (35° C).

TYPICAL PROPERTIES at 75° F (23.8° C)		
TEST METHOD		**RESULTS**
ASTM C109 Compressive Strength		
	1 Day	2,500 psi (17.2 MPa)
	7 Days	4,500 psi (31.0 MPa)
	28 Days	6,500 psi (44.8 MPa)
ASTM C 157 Length Change		
	Wet / Dry %	+0.03 / - 0.10
ASTM C78 Flexural Strength		1,000 psi (6.9 MPa)
ASTM C496 Splitting Tensile Strength		500 psi (3.4 MPa)
ASTM C1202 Rapid Chloride Permeability		Very Low

HEALTH AND SAFETY INFORMATION

Product contains epoxy resin and amines. Wear proper PPE when using this product, including gloves, eye and skin protection and NIOSH / MSHA approved respirator or dust mask. Read SDS thoroughly before use. Prop 65: This product contains chemicals known by the state of California to cause cancer.

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Every reasonable effort is made to apply exacting standards both in the manufacture of "FasTrac Structural Shotcrete" product and in the information which we issue concerning these products and their use. We warrant our products to be good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only on quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, Cornerstone Construction Material LLC (CCM) makes no warranty or guarantee, express or implied, including warranties of fitness for a particular purpose or merchantability, respecting its products, and Cornerstone Construction Material LLC (CCM) shall have no other liability with respect thereto. Any claim regarding a product defect must be received in writing within one year of the date of shipment. No claim will be considered without such written notice or after the specified time interval. The User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the Cornerstone Construction Material LLC (CCM) technical manager.

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