



IPATOP SHOTCRETE

A High Quality Repair Material for Pneumatic Application

IPATOP SHOTCRETE – Product Data Sheet **Silica Fume Enhanced Shotcrete Material**

Description:

IPATOP SHOTCRETE is a one-component, microsilica enhanced material designed for horizontal, vertical and overhead concrete repairs covering large areas. IPATOP SHOTCRETE is formulated for pneumatic application using dry process shotcrete equipment.

Uses:

IPATOP SHOTCRETE is designed for large area application structural repairs of bridges, parking garages, piers, dams, retaining walls, abutments, tunnels, buildings, etc.

Advantages:

One-component, ready to use mortar.
 High compressive and flexural strength. Rapid early development of physical properties.
 Low permeability
 Excellent bond strength to properly prepared, sound substrates.
 Low shrinkage, low water/cement ratio.
 Low rebound.
 Can be troweled or screeded after application.

Technical Data:

Compressive Strength (ASTM C-109)

1 day	1450 psi	(10.0 MPa)
7 day	4500 psi	(31.1 MPa)
14 day	5875 psi	(40.5 MPa)
28 day	6925 psi	(47.8 MPa)

Flexural Strength (ASTM C-78)

1 day	750 psi	(5.2 MPa)
28 day	900 psi	(6.2 MPa)

Length Change (ASTM C-157) (Air Cure)

1 day	-0.005%
7 day	-0.04%
14 day	-0.05%
28 day	-0.05%

Slant Shear Bond (ASTM C-882)

7 day	733 psi	(5.1 MPa)
28 day	1873 psi	(12.9 MPa)

Set Time @ 70°F: 3 hrs (Initial) 5 hrs (Final)

Note: For the above tests, IPATOP SHOTCRETE was mixed with 10% water by weight in order to achieve a mix workable enough for placement within all of the specimen molds. Actual water used when the material is applied pneumatically is significantly less, leading to an improvement of all physical properties.

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Packaging and Yield:

IPATOP SHOTCRETE is packaged in 50lb bags. Each bag yields approximately .45 cubic feet. Yield in service will vary according to the amount of water utilized during shotcrete process.

Shelf Life: One year in unopened container.

How to Use:

Surface Preparation:

Substrate must be sound, clean and free of all loose material, surface contaminants and other bond inhibiting materials. Surface preparation should be done by high pressure water blast or other appropriate mechanical means to obtain an aggregate fractured surface. Steel reinforcement must be clean and free of any rust. Substrate surface should be saturated surface dry (SSD) when applying IPATOP SHOTCRETE.

Application:

IPATOP SHOTCRETE can be applied using conventional dry process shotcrete equipment. Always apply material in accordance with ACI 506-R85 "Guide to Shotcrete". If a special finish is required, excess material should be sliced off using a cutting screed after initial set. The surface may then be finished per specification. Cure material per ACI recommendations for portland cement concrete.

Limitations:

Minimum application thickness for large areas is 1/2 inch, local areas with thicknesses less than this can be tolerated. Maximum thickness applied in one lift for large areas is 2 inches, local areas of thicker applications are possible. Do not apply materials unless ambient and surface temperatures are 40°F and rising at the time of application. Protect fresh shotcrete from rain and freezing.

Clean Up:

Uncured material can be removed with water. Cured material can only be removed by mechanical means.

CAUTION – FOR INDUSTRIAL USE ONLY

Contains portland cement and crystalline silica. Avoid contact as material may cause skin and eye irritation. Avoid breathing dust as material may cause respiratory irritation. Use only with adequate ventilation. May cause delayed lung injury (silicosis). Use of safety goggles, chemical resistant gloves and a NIOSH/MSHA approved respirator is recommended.

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water and contact a physician. For respiratory problems, remove person to fresh air.

WARRANTY

This product is warranted and guaranteed to be of good quality. Manufacturer, as its sole and exclusive liability hereunder, will replace material if proved defective. THIS WARRANTY AND GUARANTEE ARE EXPRESSLY IN LIEU OF ALL OTHERS, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND MAY NOT BE EXTENDED BY REPRESENTATIVES OR ANY PERSONS, WRITTEN SALES INFORMATION, OR DRAWINGS IN ANY MANNER WHATSOEVER.

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