



IPA SYSTEMS

IPATOP SHOTCRETE

Silica Fume Enhanced Pneumatic Applied Mortar



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QUALITY PRODUCTS FOR THE CONCRETE /MASONRY REPAIR INDUSTRY

Description

IPATOP SHOTCRETE is a one-component, micro silica 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.

Where to Use

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

Advantages

- ◆ Made in America
- ◆ Low rebound
- ◆ Low permeability
- ◆ One-component, ready to use mortar
- ◆ Can be troweled or screeded after application.
- ◆ Excellent bond strength to properly prepared sound substrates.
- ◆ High compressive and flexural strength. Rapid early development of physical properties.

Coverage

Yield is 0.45 cubic feet (0.01 cubic meter) Yield in service will vary according to the amount of water utilized during shotcrete process.

Packaging

IPATOP SHOTCRETE is packaged in 50lb bags.
Shelf life: 1 year in unopened bag. Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.

Technical Data

Compressive Strength (ASTM C 109)

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

Length Change (ASTM C 157)

(Air Cure)	
1 day	-0.005%
7 day	-0.04%
28 day	-0.05%

Slant Shear Bond (ASTM C 882)

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

Flexural Strength (ASTM C 78)

1 day	733 psi (5.1 MPa)
28 day	900 psi (6.2 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.

Surface Prep

Substrate to be repaired must be cleaned of any film, scale, loose material, oils, grease and any other foreign material that will prohibit bond. Surface preparation must be achieved by mechanical means and methods. Steel reinforcement must be clean and free of any rust. Substrate surface should be saturated surface dry (SSD) when applying IPATOP Shotcrete.

IPA SYSTEMS, INC

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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 material, surface and ambient temperature must be 40°F (4.4°C) and rising
- ◆ Minimum application: 1/2 Inch- Maximum lift: 2 inches
- ◆ Do not apply to a frozen surface or allow material to freeze
- ◆ Do not apply when raining or chance of rain.

Clean-up

Clean up must be done immediately due to the high bonding characteristics of IPATOP Shotcrete. Clean equipment with water.

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 drawing in any manner whatsoever. While the manufacturer recommends uses for the product based on tests believed reliable, no warranties, express or implied, or guarantee can be given as to particular methods of use or application, nor can performance be warranted, expressly or impliedly, or guaranteed under special conditions. Distributors, salesperson or company representatives are not authorized to extend or vary any warranties or guarantees beyond those outlined herein nor may the manufacturer's or seller's limitation of liability be waived or altered in any manner whatsoever.

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