



IPA SYSTEMS

# IPATOP HF

Pourable and Pumpable Concrete Repair Mortar



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## QUALITY PRODUCTS FOR THE CONCRETE /MASONRY REPAIR INDUSTRY

### Description

**IPATOP HF** is a one component cementitious, shrinkage compensated, flowable repair mortar for pour and pump applications. **IPATOP HF** contains a graded aggregate which eliminates segregation under pumping pressures and assists with uniform mixing, and additives which control shrinkage in both the plastic and hardened states.

### Where to Use

**IPATOP HF** is ideal for the repair of large structural sections of reinforced concrete or for areas where hand patching is impractical. Due to the high flow characteristics of **IPATOP HF**, minimal vibration is required to place the material even in areas where the reinforcement is congested or access to the repair work is restricted. Use **IPATOP HF** for the repair of beams, columns, balcony sections, or areas where formwork repair is more practical.

### Advantages

- ◆ Made in America
- ◆ Economical alternative to hand patching large repair areas.
- ◆ Shrinkage compensated in both the plastic and hardened states.
- ◆ High early strength reduces form cycle time and placement costs.
- ◆ Excellent resistance to deicing chemicals and freeze-thaw resistance
- ◆ Excellent workability and high flow characteristics result in labor savings
- ◆ Dries concrete gray

### Coverage

Approximately 0.5 cubic feet (14.2 L) per bag  
Shelf life: 1 year in unopened bag. Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.

### Packaging

55 lb. bags (24.9 kg)

### Technical Data

Compressive Strength (ASTM C 109)		Length Change (ASTM C 157)		
1 day	3050 psi (21.0 MPa)		<u>Air Cure</u>	<u>Wet Cure</u>
7 day	6500 psi (44.8 MPa)	1 day	0.00%	+0.03%
28 day	10,000 psi (69.0 MPa)	7 day	-0.04 %	+0.06%
		28 day	-0.12 %	+0.08%
Slant Shear Bond (ASTM C 882) (no epoxy at bond interface)		Flexural Strength (ASTM C 78)		
7 day	800 psi (5.5 MPa)	28 day	990 psi (6.8 MPa)	
28 day	1850 psi (12.8 MPa)			
Flow (ASTM C 230)	130.2%	Pot Life: 40 Minutes		

### 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. Saw cut the edges of the repair area to a minimum depth of at least ½-inch (1.3 cm) to avoid feather edging and to provide a square edge. Remove all concrete necessary to ensure that a minimum depth of ½-inch (3.8 cm) is achieved throughout the entire patch area. Surface must be SSD (Surface Saturated Dry) prior to application of **IPATOP HF**.

IPA SYSTEMS, INC

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### Mixing

Add 3½ quarts (3.3 L) of potable water to mixing vessel. Using a forced action mixer (Jiffy® mixer or mortar mixer) slowly start adding **IPATOP HF** powder to mixing vessel and mix for 2 to 3 minutes. Depending on ambient temperatures, up to 4 quarts (3.8 L) of mixing water may be used per 55 lb. (24.9 kg) bag of **IPATOP HF**.

### Application

Formwork of the unrestrained surface area of the repair must be kept to a minimum. Apply a non-staining, non-petroleum base form release to clean forms prior to installation of forming system. The formwork should be tight to prevent loss of material and should have properly sealed faces to ensure that no water is absorbed from the repair material. The formwork should contain drainage outlets for presoaking. Several hours prior to the placement of the repair material, the prepared concrete substrates should be saturated by filling the formwork with potable water. This water should be completely removed immediately prior to the placement of **IPATOP HF** leaving the substrate saturated surface damp with no ponded water remaining.

### Limitations

- ◆ Minimum material, surface and ambient temperature must be 40°F (4.4°C) and rising
- ◆ Minimum application: 1/2 Inch-
- ◆ Do not apply to a frozen surface or allow material to freeze
- ◆ Care must be taken to insure proper concrete practices are used in preparation, mixing, placing and curing.

### Clean-up

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

### Caution

#### **FOR INDUSTRIAL USE ONLY:**

Freshly mixed cement, mortar, grout, or concrete may cause minor skin irritation. Avoid direct contact where possible and wash exposed skin area promptly with water. If any of the cementitious material gets into the eyes, rinse immediately and repeatedly with water. If irritation persists, obtain medical assistance.

### 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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