



IPATOP HF

A One Component, Shrinkage Compensated, Flowable Repair Mortar

IPATOP HF – Product Data Sheet

Pourable and Pumpable Concrete Repair Mortar

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.

Uses:

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:

- ◆ 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.
- ◆ Superior physical properties to conventional portland cement mortars
- ◆ Excellent adhesion
- ◆ Coefficient of expansion similar to concrete
- ◆ Excellent resistance to deicing chemicals
- ◆ Excellent workability and high flow characteristics result in labor savings
- ◆ Repaired areas will breathe
- ◆ Excellent freeze-thaw resistance

TECHNICAL DATA

Physical Properties:

Compressive Strength (ASTM C 109)	1 day	3050 psi (21.0 MPa)
	7 day	6500 psi (44.8 MPa)
	28 day	10,000 psi (69.0 MPa)
Flexural Strength (ASTM C 78)	28 day	990 psi (6.8 MPa)
Slant Shear Bond Strength (ASTM C 882) (no epoxy at bond interface)	7 day	800 psi (5.5 MPa)
	28 day	1850 psi (12.8 MPa)

Length Change (ASTM C 157)		<u>Air Cure</u>	<u>Wet Cure</u>
	1 day	0.00%	+ 0.03%
	7 day	- 0.04%	+ 0.06%
	28 day	- 0.12%	+ 0.08%
Flow (ASTM C 230)		130.2%	

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<u>Packaging:</u>	55 lb. bags (24.9 kg)
<u>Yield:</u>	Approximately 0.5 cubic feet (14.2 L) per bag
<u>Pot Life:</u>	40 minutes
<u>Color:</u>	Concrete Gray

Surface Preparation:

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 at least 1½-inch (3.8 cm) is achieved throughout the entire patch area. Remove all unsound or contaminated concrete. Surface 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 may be accomplished by accepted water blast, mechanical or chemical methods. Surface must be damp prior to application of **IPATOP HF**.

Mixing Instructions:

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. 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.

Curing:

The formwork should be left in place until the design compressive strength is achieved as specified by the engineer. Once the formwork is removed, curing of the repair shall be done in accordance with ACI's Standard Practice for Curing Concrete.

Clean-up:

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

Limitations:

Do not install **IPATOP HF** unless substrate and air temperature is at least 40°F (4.4°C) and rising for the next 48 hours. Do not apply to a frozen surface. Care must be taken to insure proper concrete practices are used in preparation, mixing, placing and curing.

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 areas 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 DRAWINGS IN ANY MANNER WHATSOEVER.

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