



# IPATOP PENNGROUT

A Versatile Non-Shrink Grout

## IPATOP PENNGROUT – Product Data Sheet Non-Shrink Cementitious Structural Grout

Description:

**IPATOP PENNGROUT** is a premixed, non-metallic, cementitious, controlled expansion, high strength, versatile non-shrink grout. **PENNGROUT** contains a balanced blend of washed and graded silica sands.

Uses:

To fill voids and cavities in concrete or to anchor materials in concrete. Typical uses include setting columns, railings, posts, bridge bearing plates, anchor bolts and rods, grouting machinery baseplates and precast concrete members as well as prestressed and post tensioned cables.

Advantages:

- Has both high early and high ultimate strengths
- Offers controlled repeatable volume expansion
- Strong, maximum density, cementitious material
- Contains no corrosive or corrosion susceptible ingredients
- No calcium chloride or alumina
- Resists penetration by water, oil and chemicals
- Withstands freeze-thaw conditions, dynamic loading and vibratory loading cycles
- Economical and easy to install
- May be poured, troweled, pumped, dry packed, rammed, vibrated or agitated without segregation
- Has excellent adhesion and pull-out strengths

TECHNICAL DATA

Physical Properties:

**PENNGROUT** meets the requirements of CRD C 588-70, CRD C 621-81, ASTM C 827-82, ASTM C 191-79 and ASTM C 1107 (70°F) (21.1°C).

Qts Water/52 lb Bag	Compressive Strength, psi (MPa) (ASTM C109)			
	1 Day	3 Days	7 Days	28 Days
2 1/2 (2.4 L)	7,200 (49.6)	9,500 (65.5)	11,000 (75.8)	12,000 (82.7)
3 1/2 (3.3 L)	6,000 (41.4)	7,500 (51.7)	8,500 (58.6)	9,400 (64.8)
4 (3.8 L)	5,000 (34.5)	6,200 (42.7)	7,500 (51.7)	8,600 (59.3)
4 1/2 (4.3 L)	4,300 (29.6)	5,200 (35.9)	7,000 (48.3)	8,000 (55.2)

Yield: A 52 lb (23.6 kg) bag of **PENNGROUT** yields about 0.5 cubic feet (14.2 L) of material at the plastic consistency. Up to 25 lbs (11.3 kg) of washed pea gravel may be added per bag of **PENNGROUT** in applications where compressive and bond strengths are not critical.

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### Surface Preparation:

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. Flush thoroughly with water. Area to be grouted should be saturated with water for 6 to 12 hours prior to application; excess water should be removed before placing grout.

### Mixing Instructions:

Mixing may be done manually (small quantity) or mechanically (Jiffy® mixer or mortar mixer). If hand mixed assure thorough intermixing of material. Add the following amounts of clean potable water per 52 lb (23.6 kg) bag of

**PENNGROUT**. Mix thoroughly.

Dry Pack            2 1/2 quarts (2.4 L)

Plastic             3 1/2 quarts (3.3 L)

Pourable          4 quarts        (3.8 L)

Pumpable         4 1/2 quarts (4.3 L)

Continue to mix for an additional 2 to 3 minutes after desired consistency is achieved.

### Application:

Forms should provide at least 3 inches (7.6 cm) clearance on pouring side, 1/2 inch (1.3 cm) clearance on opposite side. To aid placement of grout, form may be slanted inward on pouring side. Pour all grout from one side to avoid forming air pockets. Cavity must be slightly overfilled to allow for tamping, screeding or vibration to insure full contact with object to be grouted. Minimum grout thickness for anchoring base plates is 3/4 inch (1.9 cm) thick.

When making larger pours, subsequent batches should be pre-mixed to permit continuous placement of grout. Working or "open time" is a minimum of 45 minutes. Forms may be removed, after 24 hours.

### Curing:

Curing of **PENNGROUT** should be accomplished using the latest ACI standards for concrete curing.

On large areas, in excess of a few square feet, water mist or wet burlap will provide the best curing conditions. Small areas can be cured with white pigmented curing compound.

### Clean-up:

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

### Packaging:

**PENNGROUT** is packaged in 52 lb (23.6 kg) bags.

### Limitations:

Do not install **PENNGROUT** 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. **DO NOT USE SOLVENT BASED CURING COMPOUNDS**. Care must be taken to insure proper concreting practices are used in preparation, mixing, placing and curing. If strength tests are required use 2" (5.1 cm) cubes for testing neat grout. Dry storage is required. Shelf life is one year.

### **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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