



Concrete Admixtures and Fiber

## IMIGROUT 100

Non-Shrink, Non-Metallic High Flow/High Strength Grout

### DESCRIPTION

IMIGROUT 100 is a high performance, non-shrink, precision grout designed for a wide range of consistencies from damp pack to high fluidity. It meets the most demanding job conditions with an extended work-time providing maximum fluidity and high strength. IMIGROUT 100 is a blend of Portland Cement, specially blended aggregates and cementitious agents, and can be easily pumped.

### USE

IMIGROUT 100 is recommended for precision grouting of machinery bases, structural grouting of steel and precast columns, anchor bolts, dowels, crane rails, and handrails which require non-shrink, high fluidity, high strength performance.

### ADVANTAGES

- Extended work-time for easy placement
- Holds up to industrial machinery vibration and impact
- Highly fluid and self-leveling for easy placement
- High strength for fast equipment turn around
- Non-staining / no chlorides
- Positive expansion for maximum bearing
- Excellent adhesion to concrete and steel

### TECHNICAL INFORMATION

IMIGROUT 100 Meets Corps of Engineers CRD C-621, ASTM C-1107. Grade C

### Application

**Surface Preparation:** Remove all dirt, oil, and loose or foreign material. Any metal in contact with grout must be free of rust, oil, grease, etc. Surface must be sound and roughened to insure proper bonding. Prior to placing grout, surface should be saturated for a minimum period of four hours and preferably twenty-four hours. Remove all excess water before placement of grout. Bolts, base plates, and equipment must be secure and rigid before placement of grout.

**Forms:** Must allow for a continuous placement of grout. Provisions for venting to avoid air entrapment must be made. From the placing side, provide a 45° angle in the forms to a height suitable to provide a head of grout during placement. On all sides provide a minimum 1/2"(1.25 cm) horizontal clearance between the base plate and forms. Forms should be at least 1"(2.54 cm) higher than the bottom of the base plate.

**Mixing:** Use a mechanical mixer: For small jobs, use a 1/2"(1.25 cm) drill with paddle; for large jobs, use a mortar mixer. Start with minimum water requirements. Add water to mixer first, then slowly add powder. Add additional water as required for desired consistency. Water requirements per bag are:

- **Plastic** 50 lbs. grout (22.7 kg) 6.50 to 7.50 pints water , 6.80 to 7.80 lbs.(3.08 to 3.54 kg) 3.10 to 3.40 liters
- **Flowable** 50 lbs. grout 7.50 to 8.65 pints water, 7.80 to 9.00 lbs. (3.54 to 4.08) 3.40 to 4.10 liters
- **Fluid** 50 lbs. grout(22.7 kg) 8.65 to 9.20 pints water , 9.00 to 9.60 lbs.(4.08 to 4.35 kg) 4.10 to 4.35 liters

## INTERNATIONAL MATERIALS INDUSTRIES, L.L.C.

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**Note:** The data shown is based on controlled laboratory testing. Reasonable variation from results shown can be expected. Field and laboratory testing should be controlled on the basis of the desired placing consistency, rather than strictly on the water content.

**Curing:** Immediately cover with clean wet rags (DO NOT use burlap) and keep moist until final set. After final set, remove rags and apply an ASTM C-309-91 IMI curing compound.

**Deep Applications:** Pre-washed graded 3/8"(1 cm) pea gravel may be used in applications thicker than 2"(5.08 cm): 2"(5.08 cm) to 5"(12.7 cm): Add 25% 3/8"(1 cm) pea gravel by weight. 5"(12.7 cm) and over: Add 50% 3/8"(1 cm) pea gravel by weight.

**Hot Weather Grouting:** Provide shade for area to be grouted. Use cool mixing water. Protect grout from the sun for up to 48 hours.

**Cold Weather Grouting:** Raise the temperature of the area to be grouted with space heaters or steam. Preheat mixing water. Cover grout to retain warmth.

**Placing:** Place continuously and quickly. Start from one side to avoid air entrapment. Be sure grout fills all spaces and remains in contact with plate. IMIGROUT 100 will remain workable for 30-40 minutes at 70°F(21.1°C). For damp packing, rod from one side to opposite side.

<b>TEST DATA</b>			
<b>Compressive Strength</b> (ATSM C-109)	<b>Plastic</b>	<b>Flowable</b>	<b>Fluid</b>
	psi (MPa)	psi (MPa)	psi (MPa)
1 day	4300(29.7)	3800(26.2)	2500(17.3)
3 days	5900(40.7)	5400(37.5)	4800(33.1)
7 days	8900(61.4)	7700(53.1)	6200(42.8)
28 days	11500(79.4)	8400(58.0)	7700(53.1)
<b>Expansion Percentage</b> (CRD C-621)			
3 days	0.07%	0.03%	0.02%
14 days	0.07%	0.03%	0.02%
28 days	0.07%	0.03%	0.02%
<b>Yield Approximately</b>	0.43 ft.3(.0122 m3)	0.44ft.3(.0125 m3)	0.45 ft.3(.0127 m3)
<b>Coefficient of thermal Expansion</b> (ASTM C-531) = 4.76 x 10 <sup>-6</sup> in/in/°F			
<b>Status Modulus of Elasticity</b> (ASTM C-469) 28 day = 3.0 x 10 <sup>6</sup> psi(20.7 x 10 <sup>3</sup> MPa)			
<b>Flexural Strength</b> (28 days) (ASTM C-78) = 1430 psi (9.9 MPa)			
<b>Tensile Strength</b> (28 days) (ASTM C-190) = 630 psi (4.3 MPa)			
<b>Split Tensile Strength</b> (28 days) (ASTM C-469) = 750 psi (5.2 MPa)			
<b>Pull Out Anchors</b>	<b>Tensile</b>	<b>Shear</b>	
1. 1½"(3.2 cm) Bolt, 9"(22.9cm) Long, 2½"(6.35 cm) Hole	53,200 lbs (24127.6 kg)	24,300 lbs. (11020 kg)	
2. 2. ½" (1.25 cm) Bolt, 4"(10.16cm) Imbed, 1.125"(2.9 cm) Hole	7,100 lbs. (3220 kg)	2,000 lbs. (907 kg)	
<b>Set Time (Fluid)</b>			
ASTM C-191	Initial	3.67 hours	
	Final	4.75 hours	

PACKAGING 50 lb. triple lined bag (22.7 kg) 60-50 lb.(22.7 kg) bags per pallet

LIMITATIONS DO NOT overdose water. This can cause bleeding or separation. DO NOT retemper. DO NOT add cement, sand, aggregate or admixtures. DO NOT mix more than can be used in thirty minutes.

