



## ITW PRC 100 NON-SHRINK – TECHNICAL BULLETIN #625J HIGH PERFORMANCE, NON-SHRINK CEMENT GROUT

Revised: 01/2019

### PRODUCT DESCRIPTION

ITW PRC 100 is a high performance, non-shrink, precision grout that meets or exceeds all requirements of the Corps of Engineers CRD C-621 and ASTM C-1107. It is designed for a wide range of consistencies from damp pack to high fluidity, meeting the most demanding job conditions.

### USE & BENEFITS

ITW PRC 100 is recommended for grouting of anchor bolts, baseplates, structural steel and pre-cast columns, dowels, etc. which require non-shrink, high tolerance, high strength performance. It is flowable for easy placement, adheres well to concrete or steel, and exhibits good impact and vibration characteristics.

### DESIGN CONSIDERATIONS

Pre-washed graded 3/8" pea gravel may be used in applications thicker than 2". In depths from 2" to 5", add 25% of the 3/8" pea gravel by weight. For depths 5" and deeper, add 50% 3/8" pea gravel by wt. When grouting in hot weather, provide shade around the area to be grouted. Use cool mixing water and protect the grout from the sun for up to 48 hours.

When grouting in cold weather, raise the temperature of the area to be grouted. Preheat the mixing water and cover the grout to retain warmth. **DO NOT** place at temperatures below 40°F or if the temperature is expected to fall below 40°F within the next 24 hour period.

ITW PRC 100 should be kept in a shaded, dry area. At no time should the packaged material be exposed to moisture.

### APPLICATION INSTRUCTIONS

Remove all dirt, oil or loose foreign material from any steel surface to come in contact with ITW PRC 100. Concrete surfaces must be sound and roughened to ensure proper bonding. Concrete surfaces should be saturated for a minimum of 4 hours but preferably for 24 hours prior to placing the grout. Remove all excess water from the foundation prior to placing ITW PRC 100.

Build the forms at least 1" higher than the bottom of the item being grouted.

A portable mortar mixer should be used when mixing the grout. Start with the minimum water requirements. **ADD WATER TO MIXER FIRST**, then slowly add powder.

**CAUTION: DO NOT OVER WATER.** Adding more water than recommended can cause bleeding, separation and a reduction of ultimate strength. **DO NOT** re-temper or add additional cement, sand or admixtures without first contacting ITW Performance Polymers.

The grout should be placed continuously by pouring from one side to the other to avoid air entrapment. Cover with clean wet rags and keep moist until final set.

Add additional water as required for desired consistency.  
Water requirements per 50 lb. bag are:

PLASTIC	FLOWABLE	FLUID
6.80 to 7.00 pints water	7 to 8 pints water	8.00 to 9.25 pints water
0.85 to 0.88 gal.	0.88 to 0.94 gal	1.00 to 1.19 gal.
7.05 to 7.30 lbs.	7.30 to 7.80 lbs.	8.33 to 9.50 lbs.
3.18 to 3.29 liters	3.29 to 3.79 liters	3.79 to 4.40 liters

### PHYSICAL PROPERTIES

	(PSI)	PLASTIC	FLOWABLE	FLUID	
COMPRESSIVE STRENGTH	3 days	5,900	5,400	4,800	ASTM C-109
	7 days	8,900	7,700	6,200	
	28 days	11,500	8,400	7,700	
STATIC MODULUS OF ELASTICITY	3 days 2.64 x 10 <sup>6</sup> psi 7 days 2.79 x 10 <sup>6</sup> psi 28 days 3.00 x 10 <sup>6</sup> psi				ASTM C-469
EXPANSION PERCENTAGE	3 days	0.07%	0.03%	0.02%	CRD D-621
	14 days	0.07%	0.03%	0.02%	
	28 days	0.07%	0.03%	0.02%	
COEFFICIENT OF THERMAL EXPANSION	4.76 x 10 <sup>-6</sup> in/in °F				ASTM C-531
FLEXURAL STRENGTH	3 days	1,055 psi			ASTM C-78
	7 days	1,230 psi			
	28 days	1,430 psi			
SPLITTING TENSILE STRENGTH	3 days	550 psi			ASTM D-496
	7 days	680 psi			
	28 days	750 psi			
STRENGTH OF ANCHORS 1-1/4" dia. bolt in a 2-1/2" dia. hole with 9" embedment 1/2" dia. bolt in a 1-1/8" dia. hole with 4" embedment	<b>TENSILE STRENGTH</b>		<b>SHEAR STRENGTH</b>		ASTM E-488
	53,200 lbs. 7,100 lbs.		24,300 lbs. 2,000 lbs.		

### PRODUCT INFORMATION

UNIT PACKAGING	Individual Bags - Super Sack				
UNIT WEIGHT	22.7 kg (50 lbs.) Bags; 1,361 kg (3,000 lb) Super Sack				
UNIT YIELD		<b>PLASTIC</b> Approx. 0.43 ft. <sup>3</sup>	<b>FLOWABLE</b> 0.44 ft. <sup>3</sup>	<b>FLUID</b> 0.45 ft. <sup>3</sup>	
APPLICATION TEMPERATURE	45°F Minimum - 90°F Maximum				
SET TIME (APPROXIMATE)		<b>PLASTIC</b> Initial: 3.5 hrs Final: 4.75 hrs	<b>FLOWABLE</b> 4 hrs 4.8 hrs	<b>FLUID</b> 3.6 hrs 4.75 hrs	ASTM C-266
SHELF LIFE	1 year in dry, shaded storage				
CLEAN UP	Water				

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