



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 7 days 28 days	5,900 8,900 11,500	5,400 7,700 8,400	4,800 6,200 7,700	ASTM C-109
STATIC MODULUS OF ELASTICITY	3 days 2.64 x 10 ⁶ psi 7 days 2.79 x 10 ⁶ psi 28 days 3.00 x 10 ⁶ psi				ASTM C-469
EXPANSION PERCENTAGE	3 days 14 days 28 days	0.07% 0.07% 0.07%	0.03% 0.03% 0.03%	0.02% 0.02% 0.02%	CRD D-621
COEFFICIENT OF THERMAL EXPANSION	4.76 x 10 ⁻⁶ in/in °F				ASTM C-531
FLEXURAL STRENGTH	3 days 1,055 psi 7 days 1,230 psi 28 days 1,430 psi				ASTM C-78
SPLITTING TENSILE STRENGTH	3 days 550 psi 7 days 680 psi 28 days 750 psi				ASTM D-496
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	TENSILE STRENGTH 53,200 lbs. 7,100 lbs.	SHEAR STRENGTH 24,300 lbs. 2,000 lbs.			ASTM E-488

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	PLASTIC Approx. 0.43 ft. ³	FLOWABLE 0.44 ft. ³	FLUID 0.45 ft. ³	
APPLICATION TEMPERATURE	45°F Minimum - 90°F Maximum			
SET TIME (APPROXIMATE)	PLASTIC Initial: 3.5 hrs Final: 4.75 hrs	FLOWABLE 4 hrs 4.8 hrs	FLUID 3.6 hrs 4.75 hrs	ASTM C-266
SHELF LIFE	1 year in dry, shaded storage			
CLEAN UP	Water			

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ITW PERFORMANCE POLYMERS

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