

## **HYBRID GROUT**

High-performance, nonmetallic, non-shrink cementitious grout

**USE FOR** 

**Heavy Static Load Machinery** 

Low Vibration Equipment

Structural Steel and Precast Concrete

Tanks, Vessels, Generators and Small Pumps

Wind Turbines

Seismic Applications

High-Load Rebar, Anchors and Dowels

High-Load Infrastructure





## **HYBRID GROUT**







## **Innovation**

FIVE STAR® HYBRID GROUT is a fusion of many key properties found in Five Star® specialty grouts. It achieves superb flowability while reaching high early and ultimate compressive strengths.

**Extend your installation season:** Because Five Star Hybrid Grout **can be installed over a wide temperature range (35-100°F/2-38°C)**, you can extend your installation season by allowing you to grout during cold and hot weather months.

**Top of its class:** Five Star Hybrid Grout **reaches one of the highest effective bearing areas (EBA) in the industry** with the use of Air Release Technology per ACI 351.1 R, and meets the performance requirements of ASTM C 1107-02 Grades A, B and C, ASTM C 1107-14a, and CRD-C 621-93 specifications.







TYPICAL PROPERTIES			
	35°F (2°C)	72°F (22°C)	100°F (38°C)
Compressive Strength, ASTM C 942 (C109 Restrained); psi (MPa)			
8 Hour	_	4,000 (27.6)	5,000 (34.5)
1 Day	2,000 (13.8)	7,500 (51.7)	8,000 ( 55.2)
7 Days	8,000 (55.2)	13,000 (89.6)	13,000 (89.6)
28 Days	12,000 (82.7)	16,500 (113.8)	17,000 (117.2)
Bond Strength, ASTM C 882 / 28 Days, concrete failure; psi (MPa)	4,000 (27.6)	4,000 (27.6)	4,000 (27.6)
Early Height Change, ASTM C 827	0.0 to 2.0%	0.0 to 2.0 %	0.0 to 2.0%
Hardened Height Change, ASTM C 1090	0.0 to 0.2%	0.0 to 0.2%	0.0 to 0.2%
Effective Bearing Area, ASTM C 1339	≥ 95%	≥ 95%	≥ 95%
Flow, ASTM C 1339; 1" height, seconds	≤ 60	≤ 60	≤ 60
Consistency Flow Test 2 x 4 in. (50 x 100 mm) cylinder, inches (mm)	8 - 12 (200-300)	8 - 12 (200-300)	8 - 12 (200-300)
Freeze/Thaw, ASTM C 666, Durability Factor	≥95%	≥95%	≥95%
Chloride Permeability, ASTM C 1202 28 days; rating (coulombs)	Very low (<1,000)	Very low (<1,000)	Very low (<1,000)
Set Time, Initial, ASTM C 191, minutes	180	120	60
Modulus of Elasticity, ASTM C 469 / 28 Days 3 x 6 in. (75 x 150 mm) cylinder, neat, psi (GPa)	_	4.5 x 10° (31.0)	_

SPECIFICATIONS SUBJECT TO CHANGE

