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## B

### BASF

MasterFlow 100 ....2  
MasterFlow 648 ....5  
MasterFlow 885 ....4  
MasterFlow 928 ....3

## C

### CGM

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## F

**FIVE STAR GROUT ....7**

## G

### GROUT

Five Star Non Shrink ....7  
General Purpose ....6  
Masterflow 100 ....2  
Masterflow 648 ....5  
Masterflow 885 ....2  
Masterflow 928 ....3  
Super Por-Rok ....8

## M

**MASTERFLOW 100 ....2**  
**MASTERFLOW 648 ....5**  
**MASTERFLOW 885 ....4**  
**MASTERFLOW 928 ....3**

## P

**POR-ROK ....8**

## Q

### QUIKRETE

General Purpose Grout ....6

## S

**SUPER POR-ROK ....8**



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## MASTERFLOW 100 Formerly Construction Grout



The Chemical Company

MasterFlow 100 is a non-catalyzed, multi-purpose construction grout containing mineral aggregate.

### PRODUCT HIGHLIGHTS:

- Concrete gray color (after curing) blends in with surrounding concrete
- No accelerators, including chlorides or other similar salts, will not contribute to corrosion of reinforcing steel
- Can be extended with clean, well-graded coarse aggregate to fill large voids
- Hardens free of bleeding when properly placed and yields a high effective bearing area for proper support and load transfer.

### APPLICATIONS:

- Interior and exterior
- Normal loads for columns and baseplates
- Bedding grout for precast panels
- Repairing of cavities resulting from ineffective concrete consolidation
- Caulking concrete pipe
- Backfilling, underpinning foundations, and pressure grouting of slabs needing alignment
- General construction applications
- Damp pack applications

### SUBSTRATES

- Concrete

### YIELD:

One 50 lb. bag of MasterFlow 100 mixed with 1.07 gallons of water (flowable mix) provides approximately 0.45 ft<sup>3</sup> of mixed grout.

#### Test Data

PROPERTY	RESULTS			TEST METHOD
<b>Compressive strength, psi (MPa)</b>				ASTM C 109, as modified by ASTM C 1107
	<b>Plastic<sup>1</sup></b>	<b>Consistency Flowable<sup>2</sup></b>	<b>Fluid<sup>3</sup></b>	
1 day	3,500 (24.0)	2,000 (13.8)	1,500 (10.3)	
3 days	6,000 (41.4)	5,000 (34.5)	3,500 (24.1)	
7 days	8,000 (55.2)	6,000 (41.4)	4,500 (31.0)	
28 days	10,000 (68.9)	7,000 (48.0)	5,500 (37.9)	
<b>Volume Change, % Flowable</b>				ASTM C 1090
	<b>Change</b>	<b>Requirement of ASTM C 1107</b>		
1 day	0.01	0.0 – 0.3		
3 days	0.01	0.0 – 0.3		
7 days	0.01	0.0 – 0.3		
28 days	0.01	0.0 – 0.3		

<sup>1</sup> 100 – 125% flow on flow table per ASTM C 1437

<sup>2</sup> 125 – 145% flow on flow table per ASTM C 1437

<sup>3</sup> 20 – 30 seconds through flow cone per ASTM C 939

This data was developed under controlled laboratory conditions. Expect reasonable variations.

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## MASTERFLOW 928

High-precision mineral-aggregate grout with extended working time.



The Chemical Company

A hydraulic cement-based mineral aggregate non-shrink grout with extended working time. It is ideally suited for grouting machines or plates requiring precision load-bearing support. It can be placed from fluid to damp pack over a temperature range of 45 to 90° F (7 to 32° C).

tural and non-structural building components

- Repairing concrete, including grouting voids and rock pockets

### YIELD:

One 55 lb. bag of MasterFlow 928 grout mixed with 10.5 lbs. or 1.26 gallons of water (fluid consistency) provides approximately 0.50 ft<sup>3</sup> of grout.

### PRODUCT HIGHLIGHTS:

- Meets the requirements of ASTM C1107 and US Army Corps of Engineers CRD C621 (Grades B and C), at a fluid consistency over a 30-minute working time.
- ANSI/NSF 61 certified for use with potable water
- Pumpable
- Extended working time
- Can be mixed at a wide range of consistencies
- Freeze/thaw resistant making it suitable for exterior applications
- Hardens free of bleeding, segregation, or settlement shrinkage to provide maximum effective bearing area for optimum load transfer
- Contains high-quality, well-graded quartz aggregate for optimum strength and workability
- Sulfate resistant for marine, wastewater and other sulfate-containing environments

### APPLICATIONS:

- Grouting of equipment, such as compressors and generators, pump bases and drive motors, tank bases, conveyors, etc.
- Grouting anchor bolts, rebar and dowel rods
- Grouting of precast wall panels, beams, columns, curtain walls, concrete systems and other struc-



PROPERTY	RESULTS			TEST METHOD	
Compressive strengths, psi (MPa)				ASTM C 942, according to ASTM C 1107 of ASTM C 109	
		Consistency			
		Flowable <sup>2</sup>	Fluid <sup>2</sup>		
	1/2"	4,500 (31)	4,000 (28)		3,500 (24)
	1/4"	6,000 (41)	5,000 (34)		4,500 (31)
1/2"	7,500 (52)	6,700 (46)	6,500 (45)		
1 1/4"	9,000 (62)	8,000 (55)	7,500 (52)		



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## MASTERFLOW 885

High-precision, non-shrink metallic aggregate grout with extended working time

Formerly EMBECO® 885

A cement-based metallic aggregate grout with extended working time. It is ideally suited for grouting machines or plates requiring optimum toughness and precision loadbearing support, including machine bases subject to thermal movement.

### PRODUCT HIGHLIGHTS:

- High strength and impact resistance
- High fluidity for ease of placement; self-consolidating
- Extended 30 minute working time ensures proper placement under a variety of conditions
- Pumpable
- High tolerance for wetting and drying cycles
- Non-shrink
- Hardens free of bleeding, segregation, or settlement shrinkage to provide maximum effective bearing area for optimum load transfer
- High tolerance to thermal movement, effects of heating and cooling making MasterFlow 885 ideal for harsh manufacturing environments

### APPLICATIONS:

- Compressors, turbines and generators
- Pump bases and drive motors
- Pulverizers
- Tank bases
- Conveyors
- Roller mills and crushers
- Stamping and grinding equipment
- Grouting anchor bolts, rebar and dowel rods



The Chemical Company

- High quality well-graded blend of metallic and quartz aggregate provides high strength, impact resistance; handles dynamic and repetitive loads
- Sulfate resistant for use in marine, wastewater, and sulfate-containing soil environments
- MasterFlow 885 grout meets the requirements of ASTM C 1107 and the U.S. Army Corp of Engineers CRD C 621, Grades B and C.
- Freeze/thaw resistant making it suitable for exterior applications.

**YIELD:** One 55 lb. bag of MasterFlow 885 grout mixed with approximately 10 lbs. or 1.2 gallons of water yields approximately 0.43 ft<sup>3</sup> of grout.



### Test Data

PROPERTY	RESULTS			TEST METHOD	
Compressive strengths, psi (MPa)	<b>Consistency</b>			ASTM C 942, according to ASTM C 1107	
		<b>Plastic<sup>1</sup></b>	<b>Flowable<sup>2</sup></b>		<b>Fluid<sup>3</sup></b>
	1 day	5,000 (34)	5,000 (34)		4,000 (28)
	3 days	7,000 (48)	6,000 (41)		5,000 (34)
	7 days	9,000 (62)	8,000 (55)		7,000 (48)
28 days	11,000 (76)	10,000 (69)	9,000 (62)		



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## MASTERFLOW 648

### High-strength, high-flow epoxy grout

Formerly MASTERFLOW 648 CP PLUS



The Chemical Company

MasterFlow 648 is an epoxy resin-based precision grout used to secure critical equipment for proper alignment and transmission of static and dynamic loads. With carefully balanced physical properties and excellent resistance to chemical attack, elevated service temperatures, vibration and torque, MasterFlow 648 is formulated for easy installation, with good flow characteristics suitable for pouring or pumping, low dust generation.

#### PRODUCT HIGHLIGHTS

- High early and ultimate strengths for rapid turnaround
- Low creep maintains equipment alignment
- Retains physical properties at elevated temperatures increasing the service range
- Low-dusting for added worker comfort and safety
- Very low shrinkage for full base-plate contact and load transfer
- Excellent flowability with high bearing area for even load distribution
- Variable fill ratio for desired flowability
- Excellent adhesion to steel and concrete for optimum load transfer & vibration dampening
- Good chemical resistance enables use in challenging environments
- Excellent freeze/thaw resistance for equipment in low temperature service environments
- Resists water and chloride intrusion for use in wet and aggressive environments
- Resists impact and dampens torque to protect

equipment and extend service life

- Extended working time
- Pumpable for maximum productivity on large grout installations.
- Durable bond to concrete and steel optimizes load transfer
- Globally available for consistent project results

#### APPLICATIONS:

- Precision alignment of compressors, generators, pumps and electric motors
- Pour-back grouting for post-tensioning cables
- Crane rail grouting
- Grouting of crusher ball mills, slab tables and other equipment subject to high torque, impact and vibration
- Grouting of wind turbine tower bases
- Grouting of anchors, bars and dowels

#### Test Data

PROPERTY	RESULTS		TEST METHOD
<b>Compressive strength, psi (MPa)</b>			ASTM C 579, Method B
<b>Consistency (Fill Ratio)</b>	<b>7 Day Ambient</b>	<b>Post Cured*</b>	
4-Bag Mix (6.55:1)	14,500 (100)	16,000 (110)	
3-Bag Mix (4.92:1)	14,000 (96)	15,000 (103)	
<b>Cure rate, filled 6.55:1</b>			ASTM C 579 Method B
<b>Compressive Strength, psi (MPa), when cured at:</b>	<b>50° F (10° C)</b>	<b>77° F (25° C)</b>	<b>90° F (32° C)</b>
<b>Time</b>			
24 Hours	4,700 (32)	10,800 (75)	12,700 (88)
2 Days	10,000 (69)	12,100 (83)	13,200 (91)
3 Days	11,000 (76)	13,000 (90)	13,600 (94)
4 Days	12,000 (83)	13,400 (92)	13,900 (96)



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## NON-SHRINK GENERAL PURPOSE GROUT



QUIKRETE® Non-Shrink General Purpose Grout is a high strength, non-metallic, Portland cement based material with expansive additives designed for grouting steel columns, bearing plates, pre-cast concrete, and anchoring applications.

### PRODUCT USE:

Typical applications for QUIKRETE® Non-Shrink General

Purpose Grout include grouting of:

- Steel columns
- Bearing plates
- Precast concrete
- Other anchoring conditions that require high in-service strength

The non-shrink characteristics of Non-Shrink General Purpose Grout make it stable and capable of handling high load transfers.

**YIELD:** Each 50 lb. bag will yield 0.45 cu ft. at flowable consistency.

**CURING:** A damp cure of at least 3 days is necessary to control the non-shrink characteristics and maintain strength levels.



TABLE 1

TYPICAL PHYSICAL PROPERTIES OF FRESHLY MIXED GROUT, ASTM C1107	
Consistency	Plastic
Temperature	72°F (22°C)
Compressive strength, ASTM C109 modified per ASTM C1107	
1 day	3,000 psi (20.7 MPa)
7 days	9,000 psi (62 MPa)
28 days	10,000 psi (68.9 MPa)
Height change, ASTM C1090	
@ 1, 3, 7 & 28 days	0 - 0.2%
Height change, ASTM C827	
	0%
Consistency	
Temperature	Flowable
	72°F (22°C)
Compressive strength, ASTM C109 modified per ASTM C1107	
1 day	3,000 psi (20.7 MPa)
7 days	8,000 psi (55.1 MPa)
28 days	9,000 psi (62.1 MPa)
Height change, ASTM C1090	
@ 1, 3, 7 & 28 days	0 - 0.2%
Height change, ASTM C827	
	0.3%
Consistency	
Temperature	Fluid
	72°F (22°C)
Compressive strength, ASTM C109 modified per ASTM C1107	
1 day	2,000 psi (13.8 MPa)
7 days	6,000 psi (41.4 MPa)
28 days	8,000 psi (55.2 MPa)
Height change, ASTM C1090	
@ 1, 3, 7 & 28 days	0 - 0.2%
Height change, ASTM C827	
	0.8%

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## FIVE STAR® GROUT

### High Performance Precision Non-Shrink Grout



**FIVE STAR**

Five Star® Grout is the industry's leading cement-based, nonmetallic, non-shrink grout for supporting machinery and equipment. It is formulated with Air Release technology that combines high performance with the greatest reliability. When tested in accordance with ASTM C 827, Five Star® Grout exhibits positive expansion. Five Star® Grout meets the performance requirements of ASTM C 1107-02 Grades A, B and C, ASTM C 1107-07, and CRD-C 621-93 specifications for non-shrink grout over a wide temperature range, 40°F -90°F (4°C - 32°C).

#### ADVANTAGES:

- Air release technology per ACI 351.1 R
- 95% Effective Bearing Area (EBA) is typically achieved following proper grouting procedures
- Provides placement versatility: pour, pump or dry pack
- 45 minute working time
- Permanent support for machinery requiring precision alignment
- Does not contain gas generating additives, such as aluminum powder
- Non-shrink from the time of placement

#### USES:

- Grouting of machinery and equipment to maintain precision alignment
- Non-shrink grouting of structural steel and precast concrete
- Grouting of anchors and dowels
- Support of tanks and vessels
- Available for Nuclear Safety Zone Applications<sup>1</sup>

**PennDOT Approved**

#### PACKAGING AND YIELD:

Packaged in heavy-duty, polyethylene lined bags & is available in 50 lb. units yielding approximately 0.5 cu.ft. or 100 lb. units yielding approx. 1.0 cu.ft. of hardened material at maximum water content.

TYPICAL PROPERTIES AT 70°F (21°C)		
Early Height Change, ASTM C 827	0.0 to 4.0%	
Hardened Height Change, ASTM C 1090	0.0 to 0.3%	
Effective Bearing Area	95%	
Bond Strength, ASTM C 882, 28 Days	2,000 psi (13.8 MPa)	
Pull-out Strength, Tension, #5 threaded bar, 7 Days	2,400 psi (16.6 MPa)	
Compressive Strength, ASTM C 942 (C109 Restrained)	Minimum Water	psi (MPa)
	1 Day	4,000 (27.6)
	3 Days	5,500 (38.0)
	7 Days	6,500 (44.9)
	28 Days	8,000 (55.2)
Working Time at 70°F (21°C)	45 minutes	



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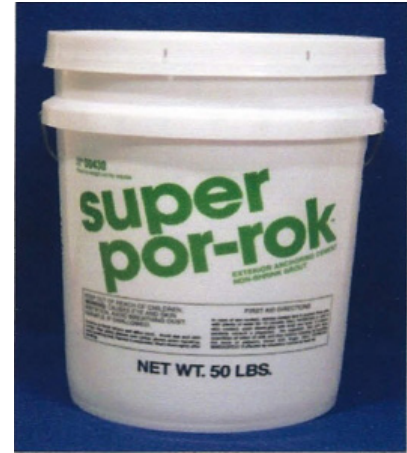
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**SUPER POR-ROK  
 ANCHORING CEMENT NON SHRINK GROUT**



**Premium Cement Based Anchoring Cement**

SUPER POR-ROK ANCHORING CEMENT is used in the anchoring of heavy machinery, railings, guard rails, banisters, repairing of cracks on damaged concrete substrate. It is a non-shrink, hydraulic, controlled expansion cement in a ready to use preparation. Water is added at the job site to provide a pourable, durable anchoring or patching compound. SUPER POR-ROK ANCHORING CEMENT has almost unlimited field applications.



**TYPICAL APPLICATIONS:**

- Anchors-Bolts, Dowels, Railings, Reinforcing rods, Machinery, Pipes in Concrete
- Grouts—Heavy Machinery, Structural Columns, Bearing Plates, Pre-cast Coumns
- In setting, exerts expansion forces which “locks in”
- Anchor bolts, railings, etc.

**PRODUCT HIGHLIGHTS:**

- No rodding, chaining or vibrating
- Pourable
- Ideal for patching floors, walls, crack in concrete structures, caulking foundations/wall voids
- Interior or Exterior use
- No heating or two component mixing needed
- Quick Setting - Sets in 15 minutes
- Expands as it sets
- Stronger than concrete in 6 hours
- Product complies with all the properties of ASTM C1107 when tested at 73 degrees.

**COMPRESSIVE STRENGTH:**

AGE	(ASTM C-109)
3 hours	2,100
1 day	4,500
3 days	4,900
7 days	5,600
28 days	7,200