



DP EPOXY GROUT HIGH FLOW

Low Exothermic, High Flow, Precision Epoxy Grout
formerly DP Epoxy Grout High Flow 201

PRODUCT DESCRIPTION

Five Star® DP Epoxy Grout High Flow High Flow is an expansive, non-shrink, low exothermic, high flow epoxy grout for machinery grouting. It has enhanced working time for use in high ambient temperature environments. Five Star® DP Epoxy Grout High Flow High Flow is a three-component, 100% solids, solvent-free system formulated to provide high strength and good creep resistance combined with the highest effective bearing area. Five Star® DP Epoxy Grout High Flow exhibits positive expansion when tested in accordance with ASTM C 827.

ADVANTAGES

- Permanent support for machinery requiring precision alignment
- Low exothermic properties with early strength development
- Chemically resistant
- Long working time
- Solvent-free clean up
- Expansive, non-shrink per ASTM C 827
- 95% Effective Bearing Area (EBA)
- Good creep resistance
- Excellent adhesion to steel
- Pumpable

USES

- Large volume applications
- Foundation rebuilds and skid mounted equipment
- Precision alignment under dynamic load conditions
- Vibration dampening for rotating equipment
- Support of chemical tanks, vessels and rotating equipment
- Aggressive chemical environments
- Operating temperatures up to 82°C
- Application thickness range 12 mm - 160 mm

PACKAGING AND YIELD

Five Star® DP Epoxy Grout High Flow is a three-component system consisting of partially filled containers of resin, hardener and polyethylene lined bag(s) of aggregate. Each 4-Bag Kit comes with four 22.7 kg bags of aggregate and yields approximately 52 liters of hardened material. The 1-Bag Kit comes with one 22.7 kg bag of aggregate and yields 13 liters of hardened material.

SHELF LIFE

Two years in original unopened packaging when stored in dry conditions; high relative humidity will reduce shelf life.

TYPICAL PROPERTIES AT 25°C

Clearances	12 - 160 mm	
Height Change, ASTM C 827, at 90°F (32°C)	Positive Expansion	
Effective Bearing Area (EBA) @ 25°C	95%	
Tensile Strength, BS 6319 Part 7 Per ASTM C 307		
7 Days	14 MPa	
Post Cured	17 MPa	
Flexural Strength, BS 6319 Part 3 Per ASTM C 580		
7 Days	28 MPa	
Post Cured @ 60°C	35 MPa	
Coefficient of Expansion, ASTM C 531	40 x 10 ⁻⁶ mm/mm/°C	
Bond to Concrete, ASTM C 882	23 MPa	
Compressive Strength, ASTM C 579 B*	Compressive Strength, MPa	Compressive Modulus, MPa
7 Days	90	10.3 x 10 ³
Post-cured at 60°C	100	11.7 x 10 ³
Working Time	May be affected by colder & warmer temperatures ¹	
@ 25°C	60 minutes	
@ 35°C	30 minutes	
@ 45°C	20 minutes	

¹ Refer to Five Star® Technical Bulletins: 200 Epoxy Grouting in Cold Weather; 201 Epoxy Grouting in Hot Weather

Materials tested per ASTM C 579 B. Rate of loading 6.35 mm per minute. The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result. Test methods are modified where applicable.

APPLICATION INFORMATION

Placement Depth	12 mm - 160 mm
	> 160 mm, call Five Star Products

PLACEMENT GUIDELINES

For optimum performance, install at temperatures between 20°C and 35°C. Maintain grout, substrate, and equipment temperatures above 15°C until grout reaches required compressive strength. Flowability and strength gain are adversely affected by lower temperatures. Components can be mixed at temperatures between 15°C and 50°C; however, results will vary. Product will be thicker and mixing more difficult at temperatures below 20°C. Thicker product may require minimum clearances greater than 12 mm. When mixed at warmer temperatures, working time will be significantly reduced. For hot or cold weather grouting refer to *Five Star® Technical Bulletins Cold and Hot Weather Grouting*.

- SURFACE PREPARATION:** Construction practices dictate concrete foundation should achieve its design strength before grouting. Epoxy grouting on green concrete (>5% moisture) is not recommended. All surfaces to be in contact with Five Star® DP Epoxy Grout High Flow shall be dry and free of oil, grease, laitance and other contaminants. To maximize bond, concrete surfaces should be prepared by acceptable means to coarse aggregate exposure. Remove all oxidation from exposed steel. If necessary, for coated surfaces it is recommended to remove a minimum of two-thirds of the coating to a clean metal finish for optimum bond.
- FORMWORK:** Formwork should be constructed 24-hours prior to the pour. Formwork shall be constructed of rigid non-absorbent materials, securely anchored, liquid-tight and strong enough to resist forces developed during grout placement. The clearance between formwork and baseplate shall be sufficient to allow for a headbox to be placed between the edge of the baseplate and the form. The clearance for remaining sides shall be 25 - 50 mm. Formwork and areas where bond is not desired must be treated with grease, paste wax, or similar material. Isolation/ construction joints should be used on pours of larger dimensions/volumes; contact Five Star Products for details.
- MIXING: Mortar Mixer** (stationary barrel with moving blades) Pour all Component B (hardener) into pail containing Component A (resin). Mix thoroughly by hand with a paddle or with a slow speed drill and paddle mixer to avoid air entrapment. Pour mixed liquids into mixer large enough to accommodate the total mix. While mixing, slowly add multiple bags of Component C (aggregate) and mix only until aggregate is completely wet. Note: Component C (aggregate) should be added immediately after mixing Component A (resin) and Component B (hardener). Working time is approximately 60 minutes when temperatures are at 25°C. **DO NOT MIX WITH WATER.**
Single Bag Mixing Drill and Paddle Pour all Component B (hardener) into pail containing Component A (resin). Mix thoroughly by hand with a paddle or with a slow speed drill and paddle mixer to avoid air entrapment. Pour mixed liquids into vessel large enough to accommodate the total mix. While mixing, slowly add 1 bag of Component C (aggregate) and mix only until aggregate is completely wet. Note: Component C (aggregate) should be added immediately after mixing Component A (resin) and Component B (hardener). Working time is approximately 60 minutes when temperatures are at 25°C. **DO NOT MIX WITH WATER.**
- METHODS OF PLACEMENT:** Five Star® DP Epoxy Grout High Flow may be poured or pumped into place. All grout shall be placed from one side to the other, maintaining contact with the bottom of the baseplate at all times. When possible, use of a headbox is highly recommended. For clearances greater than 160 mm or volumes more than 1.0 cubic meters, call Five Star Products. When pumping Five Star® DP Epoxy Grout High Flow use of a peristaltic pump may produce best results.
- POST-PLACEMENT PROCEDURES:** Until initial set, ensure that grout maintains continuous contact with the bottom of the baseplate and formwork remains leak-free. No wet curing is allowed. Protect from direct sun exposure until initial set. In-service operation may begin immediately after minimum required grout strength and modulus have been achieved.
- CLEAN UP:** All tools and equipment may be cleaned with a water and strong detergent solution or suitable solvent before material hardens. Sand may be used as an abrasive.

NOTE: PRIOR TO APPLICATION, READ ALL PRODUCT PACKAGING THOROUGHLY. For more detailed placement procedures, refer to *Five Star® Design-A-Spec™ installation guidelines* or call Five Star Products.

HEALTH and SAFETY

Contains cementitious material. May produce an allergic reaction. Take appropriate measures to avoid breathing dust. Avoid contact with eyes and contact with skin. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes. Immediately call a physician. Wash skin thoroughly after handling. Keep product out of reach of children. PRIOR TO USE, READ THE SAFETY DATA SHEET.

SKU / PRODUCT CODE	DESCRIPTION	# UNITS/PALLET	UNIT SIZE
33186	Five Star® DP Epoxy Grout High Flow 4-Bag Kit	36	Resin (A): 12.5 kg
		90	Hardener (B): 3.3 kg
		54	Aggregate (C): Four 22.7 kg bags
33176	Five Star® DP Epoxy Grout High Flow 1-Bag Kit	90	Resin (A): 3.2 kg
		240	Hardener (B): 0.82 kg
		54	Aggregate (C): One 22.7 kg bag

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