

## FIVE STAR DEEP POUR PRECISION EPOXY GROUT

**LOW EXOTHERM IN LARGE VOLUME PLACEMENTS  
EXPANSIVE, NON-SHRINK PER ASTM C827  
HIGH EARLY STRENGTH  
EXCELLENT CREEP RESISTANCE  
LONG WORKING TIME  
CHEMICAL RESISTANT**

**PRINCIPLE USES:**

- Single large volume placements, 13-230mm deep or up to 1,4 cu m.
- 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.
- Installation of anchors and dowels.

**PACKAGING AND YIELD:**

Five Star DP Epoxy Grout is a three-component system consisting of resin, hardener and polyethylene lined bag of aggregate. Available in kits yielding 14,4 litres.

**PLACEMENT GUIDELINES:**

**SURFACE PREPARATION:**

All surfaces to be in contact with Five Star DP Epoxy Grout shall be free of oil, grease, laitance and other contaminants. Concrete must be clean, sound, dry and roughened to ensure a good bond. Surfaces should be prepared in accordance with 1 or 3 of "Surface Preparation Methods". Provide a SSPC-SP6 commercial finish on all metal surfaces to ensure proper adhesion when required.

**TEMPERATURE CONDITIONS:**

Do not attempt to install material if the temperature of the surfaces is not within 16 to 32°C. The cure time and application properties are severely affected – refer to extreme conditions.

**FORMS AND ISOLATION JOINTS:**

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 75 to 125mm to allow for headbox. The clearance for remaining sides shall be 25 to 50mm. Areas where bond is not desired must be treated with paste wax or polyethylene lined. Isolation joints should be placed at 1,2 metre centres.

**TYPICAL PROPERTIES AT 25°C**

Clearances	13-230mm	
Height Change ASTM C-827	Positive Expansion	
Effective Bearing Area	95%	
Creep, ASTM C-1181 1 Year (2.8 MPa) (60°C)	4.3 x 10 <sup>-3</sup> mm/mm	
Tensile Strength ASTM C-307	13.8 MPa	
Flexural Strength ASTM C-580	27.6 MPa	
Coefficient of Expansion ASTM C-531	32 x 10 <sup>-6</sup> mm/mm/°C	
Bond to Concrete ASTM C-882	Concrete failure	
<b>Compressive Strength ASTM C-579B</b>	<b>Compressive Strength MPa</b>	<b>Compressive Modulus MPa</b>
1 Day	62.1	9.7 x 10 <sup>3</sup>
7 Days	89.7	13.1 x 10 <sup>3</sup>
Post cured at 60°C	100.3	13.8 x 10 <sup>3</sup>
Working Time	60 Minutes	
Shelf Life	12 Months	

# APPLICATION INSTRUCTIONS

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application procedure. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the materials.

## MIXING:

For optimum performance, all components should be conditioned to between 21°C and 27°C prior to use. Add all the activator components to the base components. Mix thoroughly by slow speed mixer for 3 minutes to avoid air entrapment. Pour mixed liquids into mortar mixer. While mixing, slowly add Component C (aggregate) and mix only until aggregate is completely wet. Working time is approximately 60 minutes when temperatures are at 25°C.

## METHOD OF PLACEMENT:

Five Star DP Epoxy Grout may be placed from one side to the other, maintaining contact with the bottom of the baseplate at all times. For clearances greater than 230mm and/or more than 1,4cu m, call the StonCor Technical Centre at 011 254 5500.

## POST-PLACEMENT PROCEDURES:

Final finishing of exposed surfaces is aided by using a solvent-wiped trowel just before material becomes unworkable. 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 water and a strong detergent solution or solvent before material hardens. Sand may be used as an abrasive.

**NOTE: Prior to application, read all product data sheets and packaging thoroughly.** For more detailed placement procedures, contact StonCor Technical Centre at 011 254 5500.

## LIMITATIONS:

- Flowability and strength gain are adversely affected by lower temperatures.
- For placement temperatures below 16°C or above 32°C, refer to Extreme Weather Conditions.
- To obtain bond, concrete shall be visibly free of surface moisture.
- When clearances are outside the recommended range or when exceeding maximum placement volumes, contact the StonCor Technical Centre.
- Do not add solvents to increase flowability.
- For continuous operating temperatures exceeding 82°C, contact the StonCor Technical Centre
- Construction practices dictate concrete foundation, which should achieve its design strength before grouting.

## EXTREME WEATHER CONDITIONS

### COLD:

Low temperatures decrease flow, delay set and strength development of epoxy products. The procedure below will compensate for these conditions:

- Materials shall be conditioned for 16 hours so that placed grout is between 21°C and 27°C. All surfaces in contact with grout shall be preconditioned and maintained between 16°C and 27°C for at least 16 hours. Heated enclosures must be windproof and weatherproof. Heaters shall not be permitted to unevenly heat concrete, nor contaminate the concrete with exhaust fumes. Grout temperature shall be maintained above 16°C until grout reaches minimum required strength. Gradually reduce grout temperature to ambient to avoid thermal shock.

### HOT:

High temperatures accelerate set, decrease working time, and accelerate strength gain of epoxy products. The procedure below will compensate for these conditions.

Materials shall be conditioned for 16 hours so that placed grout is between 21°C and 27°C. All surfaces in contact with grout shall be preconditioned and maintained between 16°C and 27°C and may best be done at night. Shade application areas from direct sunlight and pour grout when temperatures are decreasing. When other cooling methods are used, extreme caution shall be taken to insure all surfaces in contact with grout are completely dry before grouting. Grout shall remain shaded and protected for at least 16 hours after placement.

**CAUTION: MAY CONTAIN FLAMMABLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRONIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NONFERROUS TOOLS AND TO WEAR CONDUCTIVE AND NONSPARKING SHOES**



**StonCor Africa (Pty) Ltd**

Co. Reg. No. 1996/001848/07

Tel: +27 (0)11 254 5500

Website: [www.stoncor.co.za](http://www.stoncor.co.za)

E-mail: [stoncorsa@stoncor.com](mailto:stoncorsa@stoncor.com)