

# CHOCKFAST® RED SG Thin Pour - Rapid Cure High Strength Epoxy Grout

## Bulletin: # 618G

CHOCKFAST RED SG is a three component, high strength, 100% solids epoxy grouting compound which is used to grout large machinery and to support soleplates in all types of foundation designs with clearances as little as 25mm (1"). CHOCKFAST RED SG has extremely high physical properties and negligible shrinkage, making it ideal for final positioning of critically aligned equipment within close tolerances. Skid mounted compressors, extruders, turbines, pumps, motors and crane rails are just a few types of equipment supported on CHOCKFAST RED SG. When using CHOCKFAST RED SG for crane rail applications expansion joints may be placed every 3m (10').

CHOCKFAST RED SG has the following advantages when compared to conventional cementitious grouts:

- Impervious to oil and chemical attack
- Pre-packaged unit
- Higher physical strengths
- Unaffected by weathering and freeze/thaw cycling
- Cures at least three times as quickly
- Grout machinery in final aligned position
- Strong bond to metal and concrete
- Superior resistance to fatigue

CHOCKFAST RED SG contains no non-reactive diluents which could interfere with the curing mechanism or which could cause material loss during or after cure. Machinery may be positioned at its final elevation before pouring because the shrinkage is negligible. Critical alignments are maintained during machinery operation due to CHOCKFAST RED SG's high dimensional stability and resistance to creep and vibration.

CHOCKFAST RED SG may be mixed with a contractor's hoe and wheelbarrow or in a portable mortar mixer. Thoroughly mix hardener with resin first before mixing in aggregate. Where a very flowable mix is required, the aggregate content may be reduced accordingly. Contact the CHOCKFAST Representative or ITW Philadelphia Resins when reducing aggregate. (Please see below for cold temperature applications).

CHOCKFAST RED SG is quick curing relative to cement grouts, but the cure is thermally gentle. This allows thick pours to be made without causing the stress cracks often associated with a hot curing epoxy grout. CHOCKFAST RED SG may be used in any thickness greater than 25mm (1"); however, individual pours should generally not exceed 100mm (4") in thickness and 1.5m (5') in length.

For design considerations and application details, please request Bulletin No. 643 or contact ITW Philadelphia Resins' Engineering Services Department.

NOTE: Standard CHOCKFAST RED is available and allows deep single pours to 450mm (18") for concrete reconstruction. Please see Bulletins No. 642 and 617.

### FOR COLD TEMPERATURE APPLICATIONS 0°C - 15°C (32°F - 60°F):

A cold temperature accelerator is available for use with CHOCKFAST RED SG at ambient concrete foundation and CHOCKFAST RED SG material temperatures between 0°C (32°F) and 15°C (60°F). The accelerator is provided in a 0.9L (1 quart) plastic bottle which has a single reduction line on it and is inverted for ease of use. The accelerator is added to each unit of CHOCKFAST RED SG immediately **AFTER** the aggregate has been blended into the pre-mixed liquid components in the mortar mixer. For ambient temperatures between 0°C and 10°C (32°F and 50°F) use the entire bottle which is equivalent to 7.3% of the net weight of resin and hardener.

For ambient temperatures between 10°C and 15°C (50°F and 60°F) empty the bottle until the liquid level is even with the reduction line when the bottle is held upside down in the pouring position. This amount of accelerator is equivalent to 5% of the net weight of resin and hardener. Cure times are as follows:

0°C (32°F)	90 hours *
5°C (40°F)	48 hours *
10°C (50°F)	24 hours *

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\* These cure times represent the amount of time required to produce compressive strength in excess of 700 kg/cm<sup>2</sup> (10,000 psi) at the temperatures indicated. Machinery may be set and anchor bolts torqued when casting sections 30 mm to 50 mm (1.25 inches to 2 inches) thick at the above temperatures. Additional curing and higher compressive strength will be achieved over time, with final physical properties equivalent to those for standard applications of CHOCKFAST RED SG cured at 22°C (75°F) without addition of accelerator.

PLEASE NOTE: CHOCKFAST RED SG cure rates and flowability will be enhanced somewhat if material temperatures are warmer than the existing ambient conditions listed above, although, CHOCKFAST RED SG material temperatures should never be higher than 21° C (70° F) when utilizing cold temperature additive. It is always a good idea to keep CHOCKFAST RED SG materials in a well protected area until the job site is fully prepared for mixing and placement.

### PHYSICAL PROPERTIES

COEFFICIENT OF LINEAR THERMAL EXPANSION: Temperature Range 0° to 60°C (32° to 140°F)	19.4 x 10 <sup>-6</sup> /C° (10.8 x 10 <sup>-6</sup> /F°)	ASTM D-696
COMPRESSIVE MODULUS OF ELASTICITY:	138535 kg/cm <sup>2</sup> (1.97 x 10 <sup>6</sup> psi)	ASTM C-379 (Modified)
COMPRESSIVE STRENGTH:	1275 kg/cm <sup>2</sup> (18120 psi)	ASTM C-579 (Modified)
FIRE RESISTANCE:	Self-Extinguishing	ASTM D-635
FLEXURAL STRENGTH	340 kg/cm <sup>2</sup> (4800 psi)	ASTM C-580
FLEXURAL MODULUS OF ELASTICITY	184200 kg/cm <sup>2</sup> (2.62 x 10 <sup>6</sup> psi)	ASTM C-580
LINEAR SHRINKAGE:	Not Measurable	ASTM D-2566
POT LIFE:	1 hour @ 21°C (70°F)	
SPECIFIC GRAVITY:	2.24	
TENSILE STRENGTH:	150 kg/cm <sup>2</sup> (2130 psi)	ASTM D-638
COVERAGE:	96 kg (211lb.) 45.3 liters (1.6 ft <sup>3</sup> )	
CURE TIME:	24 to 48 hours @ 21°C (70°F)	
PACKAGING :	Resin: 9.05 liters (3 gal. can) Hardener: 1.63 liters (1 gal. can) Aggregate: 4 - 21 kg bags (46 lb. bags) Additive (if needed): 0.9 liter (1 qt. bottle)	
SHELF LIFE: April, 2003	Two years in dry storage	