REDBAC Non-Corrosive Deep Pour Grout – K-840

Description:

REDBAC Non-Corrosive Deep Pour 3CE is a DOT Non-Corrosive version of our standard Deep Pour 3CE Grout. The three component, 100 % solids, VOC and BGE[1] free, epoxy resin system is designed specifically for pours up to 8" (20.3 cm). Non-Corrosive Deep Pour 3CE offers the same rapid strength development, excellent flow characteristics, and minimal shrinkage. Non-Corrosive Deep Pour 3CE flows into spaces under machines, fills completely before solidifying and is self-leveling. It will survive impact and vibration equal to reinforced rubber materials and will not delaminate under the most severe shock loads.

Intended Use:

- Deep grouting of large machine bases
- Setting large leveling wedges
- Setting large sole plates
- Deep repairs in foundations
- Concrete alternative for critical machine settings
- Economical large volume applications

Application Guidelines:

The working time (the time you have before it sets) of this grout will vary according to the air temperature. The average working time at 72°F (22°C) will be 45 minutes. In cooler weather you will have more time to pour material and in hotter weather you will have less time.

The cure time (the time before the grout is strong enough for use) will also depend on the air temperature and the temperature of the floor and machinery being grouted. The average cure time from the last pour to machinery start-up will be 24 hours at 72°F (22°C). In cool weather, the grout will cure and develop strength more slowly than in hot weather. Remember that the temperature of the foundation concrete must be taken into account along with the air temperature when assessing the cure time needed.

Handling Properties:

MAXIMUM DEPTH OF POUR, in. (cm)	8	(20.3)			
WORKING TIME, min	45				
GEL TIME					ASTM D 2471
@ 50 °F (10 °C)	8-10h				
@ 72 °F (22 °C)	90 min				
@ 90 °F (32 °C)	60 min				
	Standard		**High Flow**		
PEAK EXOTHERM (1 lb or 454g mass), °F (°C)	86	(30)	90	(32)	ASTM D 2471
SPECIFIC GRAVITY, g/ cm^3	2.19		2.14		ASTM D 792

Physical Properties:

	Standard (5 Bag)		**High Flow (4 Bag)**		
COMPRESSIVE STRENGTH, psi (MPa)					ASTM D 695
8 h	2,700	(19)	1,400	(10)	
16 h	10,000	(69)	9,700	(67)	
24 h	11,400	(79)	12,400	(86)	
3 days	14,200	(98)	15,400	(106)	
COMPRESSIVE STRENGTH, psi (MPa)					ASTM C 579
7 days	15,200	(105)	15,800	(109)	
28 days	16,000	(110)	17,000	(117)	
COMPRESSIVE MODULUS, psi (MPa)	599,700	(4136)	637,000	(4393)	ASTM D 695
TENSILE STRENGTH, psi (MPa)	2,800	(19)	2,400	(17)	ASTM D 638
FLEXURAL STRENGTH, psi (MPa)	6,700	(46)	6,500	(45)	ASTM D 790
HEAT DISTORTION TEMPERATURE, °F (°C)	136	(58)	136	(58)	ASTM D 648
MAX CONTINUOUS SERVICE TEMPERATURE, °F (°C) (for non load-bearing applications)	250	(121)	250	(121)	
COEFFICIENT OF THERMAL EXPANSION, 10^{-6} /°F	17.4		18.4		ASTM D 696
EFFECTIVE BEARING AREA, %	≥95		≥95		ASTM C 1339
BOND TO CONCRETE (concrete failure), psi (MPa)	≥ 550	(3.8)	≥ 550	(3.8)	ASTM C 882
ADHESION TO STEEL (clean, sandblasted), psi (MPa)	2,500	(17.2)	2,500	(17.2)	ASTM D 4541
HARDNESS, Shore D	93		93		ASTM D 2240
WATER ABSORPTION %					ASTM D 570
28 day immersion @ 72°F or 22°C	0.17		0.21		
CREEP (@600 psi or 4 MPa, @150°F or 65.5°C), in./in. or cm/cm	5.00 x 10-3		6.75 x 10-3		ASTM C 1181

1 – Butyl Glycidyl Ether. The EPA (SARA Title III, section 312) lists BGE as "Toxic" (per ANSI Z129.1) by skin absorption and an immediate health hazard.

Surface Preparation:

CONCRETE PREPARATION: Remove all oil, grease, or contaminated concrete. Chip the surface down to sound aggregate. The concrete must be **dry** and have no water in the anchor bolt holes. Light acid etching surface preparation procedures may result in poor bond and should be avoided. Do not prime or seal concrete surfaces.

FORMING: Standard wood or metal forming may be used. The forms should be protected with heavy coats of paste wax, grease, or form release agent. Wrapping the forms with heavy plastic is acceptable. The forms must be caulked and sealed to a liquid-tight condition.

When placing forms for grouting, it is absolutely necessary that the top of the forms be at least half way up the sides of the base plate or machine base. Placing the grout just to the bottom of the base plate will result in an improper grout job. If the forms cannot be placed half way up the side of the machine base, the minimum distance is 3/4 inch (1.9 cm) above the bottom of the machine base.

The forms should be placed between 2 and 6 inches (5.08 and 15.24 cm) away from the perimeter of the machine base to allow for the air to escape and to provide for a grout shoulder around the base plate.

PREPERATION OF METAL SURFACES: Base plates or sole plates to be grouted should be sand blasted to a "white metal" condition. If it is impossible to grout within 24 hours of sand blasting, the surfaces should be primed with a high-quality primer. Do not use porch and deck enamel or red-lead primer.

Application:

Working time/pouring time will depend on grout temperature and ambient temperature. The average working time, at 72°F (22°C) is 45 minutes. Pouring time and viscosity decrease as temperature increases. Care should be taken to insure that the entire kit is poured before the working time elapses. In other words, do not mix more than you can pour during the working time.

Always sweep (pour) from one side of the base toward the other to eliminate entrapped air. The storage temperature of the unmixed kits of grout will greatly affect both the ease of pouring and the cure time. For best results, grout kits should be stored in a warm room for at least 24 hours before use.

During cold weather (below 50°F or 10°C), it is important that the foundation be enclosed and maintained above 50°F or 10°C. The cure time of the grout will be longer during cold weather and it is important that the grouted area be kept warm (above 50°F or 10°C) until the grout has cured completely. Do not pour if the grout is below 50°F (10°C). Conversely in hot weather, do not mix and pour in direct sunlight. Cover or “tent” operations to prevent grout from setting up too fast, which usually leads to excessive shrinkage and/or cracking.

Packaging:

Non-Corrosive Deep Pour 3CE Grout is a three component system that includes five bags of aggregate for a unit yield of approximately 2.0 cubic feet (273lb kit). If higher flow is required one bag of aggregate may be put aside (4 bag) for a unit yield of approximately 1.7 cubic feet.

K-840-54: 682 $in.^3$ = 0.4 $ft.^3$, approximately (11,327 cm^3)
K-840-273: 3446 $in.^3$ = 2.0 $ft.^3$, approximately (0.06 m^3)

SAFETY PRECAUTIONS

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymers, sanding) may cause high vapor concentrations. **DO NOT WELD ON, BURN OR TORCH ON OR NEAR, ANY EPOXY MATERIAL. HAZARDOUS VAPOR IS RELEASED WHEN AN EPOXY IS BURNED.**

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