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Technical Bulletin

REDBAC X-TRA Temp High Performance Grout – K-052

Description:

Redbac X-tra Temp High Performance Grout is a two-component, 100% solids epoxy resin system specifically formulated for applications requiring chemical resistance and high strength at service temperatures of 400 $^{\circ}$ F (204 $^{\circ}$ C). Exceptional chemical resistance against most acids and solvents make it ideal for highly corrosive plant environments.

Intended Use:

- Grouting machine bases
- Setting sole plates
- Setting anchor bolts
- Repairing deteriorated foundations
- Setting leveling wedges
- Enhancing concrete surfaces

Application Guidelines:

To use Redbac X-tra Temp High Performance Grout, pour the hardener into the resin and mix until a uniform color appears, usually 3-4 minutes. The pouring depth suggested maximum is up to 1/2 inch (1.3 cm) for typical installations. See the back of this bulletin for application instructions. The working life (the time the material can be poured before it sets) of Redbac X-tra Temp High Performance Grout will vary according to the air temperature. The average working life at $70\,^{\circ}\text{F}$ ($21\,^{\circ}\text{C}$) will be about 1 hour. In cooler weather you will have more time to pour and in hotter weather, you will have less time. Generally, having two people working with the grout - one mixing and one pouring - is the best approach.

The cure time (the time before the grout is strong enough for use) will depend on the air temperature, the temperature of the floor, and machinery being grouted.

NOTE: An elevated temperature step-cure is <u>required</u> to realize full physical properties of the X-tra Temp grout. A cure schedule of 16-24 hours at room temperature, followed by 2 hours @ 150-175°F and another 3 hours @ 300-350°F is recommended prior to putting the X-tra Temp grout into service.

Handling
Properties:

SPECIFIC GRAVITY, g/cm ²	1.66	ASTM D 792
MIXED VISCOSITY, cP or mPa.s	7,000	ASTM D 2393
WORKING LIFE , h	1	
GEL TIME , h	3	ASTM D 2471
MAXIMUM DEPTH OF POUR, in. (cm)	0.5 (1.27)	

Physical Properties:

COMPRESSIVE STRENGTH, psi (MPa)	17,200	(138)	ASTM D 695
TENSILE STRENGTH, psi (MPa)	5,500	(38)	ASTM D 638
FLEXURAL STRENGTH, psi (MPa)	7,900	(54)	ASTM D 790
HEAT DISTORTION TEMPERATURE, °F (°C)	320	(160)	ASTM D 648
MAXIMUM CONTINUOUS SERVICE TEMPERATURE, °F (°C)	425	(218)	
(for non load-bearing applications)			
HARDNESS, Shore D	88		ASTM D 2240
WATER ABSORPTION (30 days @ 72 °F or 22 °C), %	0.50		ASTM D 570
CREEP (24 hours @ 600 psi or 4 MPa load and 150 °F or 66°C),			
in./in. or cm/cm	1.01x10	-3	ASTM C 1181

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 sand blasting or 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 (between 5 and 15 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.

PREPARATION OF METAL SURFACES: Base plates or sole plate 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.

Mixing:

Two component grouts (Resin & Hardener) - Open both containers and pour the entire contents of the small can (hardener) into the large container (resin). Mix with mixing paddle in a low speed drill until a uniform color appears (3 to 4 minutes). **DO NOT ADD ANY WATER.**

Application:

Always sweep (pour) from one side of the base toward the other to eliminate entrapped air. The storage temperature of the unmixed kits of REDBAC will greatly affect both the ease of pouring and the cure time. For best results, REDBAC kits should be stored in a warm room for at least 24 hours before use. Do not pour if the grout is below 50 $^{\circ}$ F (10 $^{\circ}$ C).

During cold weather (below 50 °F or 10 °C), it is important that the foundation be enclosed and maintained above 50 °F (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.

Uncured REDBAC grout can be removed from tools and equipment with non-flammable Copps Enviro Kleen or isopropyl alcohol.

Packaging:

K-052-20: 2 Gallon = 330 in.³ = 7.57 l K-052-44: 5 Gallon = 735 in.³ = 18.93 l

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.** Avoid skin or eye contact. Wash skin with soap and water if contact occurs. If eye contact occurs flush with water for 15 minutes and obtain medical attention. Read and understand all cautions on can labels and safety data sheets before using this material.

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