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TECHNICAL BULLETIN

Marine Chocking Grout – K-944

Description:

Marine Chocking Grout is a two component, 100% solids, BGE-free epoxy resin system specifically designed for chocking and grouting applications. Marine Chocking Grout is resistant to water and most fuels, oils, acids, and alkalis.

Product Advantages:

- Very high compressive strength
- Very high service temperature
- Very low water absorption
- Very high flexural strength

Application Guidelines:

The working time (the time you have before it sets) of Marine Chocking Grout will vary according to the air temperature. The average working time at 72°F (22°C) will be 20 minutes. In cooler weather you will have more time to pour material and in warmer 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 is 24 hours at 70°F (21°C). In cool weather, the grout will cure and develop strength more slowly than in hot weather. Remember the temperature of the foundation should be taken into account along with the air temperature when figuring the cure time needed.

Handling Properties:

SPECIFIC GRAVITY, g/cm^3	1.58	ASTM D 792
MIXED VISCOSITY, cP or mPa.s	11,000	ASTM D 2196
WORKING TIME, min	20	
GEL TIME, min	30	ASTM D 2471
MAXIMUM DEPTH OF POUR, in. (cm)	See Chart	

Physical Properties:

COMPRESSIVE STRENGTH, psi (MPa)	20,000	(138)	ASTM D 695
COMPRESSIVE MODULUS, psi (MPa)	391,000	(2697)	ASTM D 695
TENSILE STRENGTH, psi (MPa)	5,500	(38)	ASTM D 638
FLEXURAL STRENGTH, psi (MPa)	8,700	(60)	ASTM D 790
MAXIMUM CONTINUOUS SERVICE TEMPERATURE, °F (°C) (for non load-bearing applications)	300	(149)	
HARDNESS, Shore D	93		ASTM D 2240
WATER ABSORPTION (30 days @ 72°F or 22°C), %	0.13		ASTM D 570

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. 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 (5.08-15.24 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.

PREPARATION 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.

Mixing:

Mix the Resin (Part A) and the Hardener (Part B) with a slow speed drill (500 rpm or less) and Jiffy Mixer (mixing paddle) until uniform (2 to 4 minutes). The hardener ratio can be varied as needed depending on chock thickness and substrate temperature. The Reduction Guide Graph on the following page is for guidance only with optimum hardener amount usually slightly higher than depicted.

Example: For a 30-mm (1-3/16”) chock thickness with a steel temperature of 30°C (86°F), it is recommended that a 1/2 Hardener Reduction be used. The hardener bottle is inverted and meant to be read in the inverted position. Squeeze bottle while inverted to dispense hardener to the 1/2 reduction level line for this example and dispose of the excess hardener (see SDS for proper disposal considerations).

Application:

Working time/pouring time will depend on grout temperature and ambient temperature. The average working time, at 72°F (22°C) is approximately 20 minutes. Pouring time and viscosity decrease as temperature increases. Care should be taken to ensure that the entire kit is poured before the working time elapses. In other words, do not mix more than you can pour within 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 Marine Chocking Grout will greatly affect both the ease of pouring and the cure time. For best results, Marine Chocking Grout kits should be stored in a warm room for at least 24 hours before use.

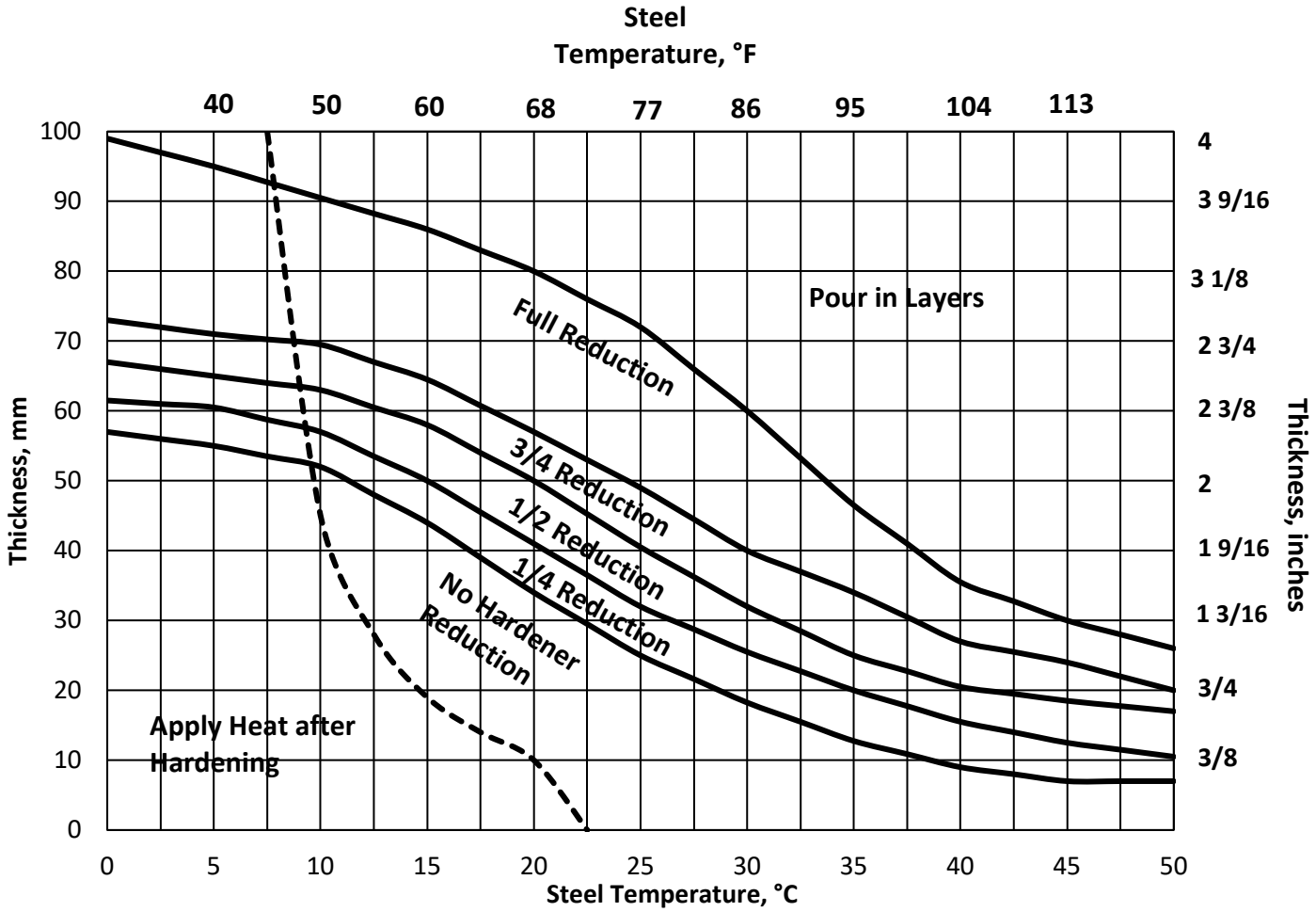
During cold weather (below 50°F), it is important that the foundation be enclosed and maintained above 50°F. The cure time of the grout will be longer during cold weather, and it is important that the grouted area be kept warm (above 50°F) until the grout has cured completely. Do not pour if the grout is below 50°F. 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.

Uncured Marine Chocking Grout can be removed from tools and equipment with non-flammable Copps Enviro Kleen, isopropyl alcohol, xylol or ketones.

Packaging:

K-944-240 (7.7)1: 1 Gallon = 135in.^{3} = 2212 cm^3

Reduction Guide Graph
Between Steel and Concrete



SAFETY PRECAUTIONS

Avoid breathing 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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