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Technical Bulletin

Copps XP-3000 High Performance Non-Corrosive Backing -K-831

Description:

Copps XP-3000 is a DOT non-corrosive version of our current ultimate backing material, XP-2000. Like XP-2000, Copps XP-3000 is designed to engage the most challenging crushing conditions: gyratories, primary crushing, wet crushing, and hard or excessively abrasive media.

Non-Corrosive XP-3000 does not contain BGE[1], VOC's, or nonyl phenol[2]. It offers exceptional heat, water, and shrinkage resistance. When properly mixed and poured, XP-3000 will withstand the most demanding crushing applications.

Handling Properties:

SPECIFIC GRAVITY, g/cm^3	1.63		ASTM D 792
DENSITY, lb./gal	13.63		ASTM D 792
MIXED VISCOSITY, cP or mPa.s	8,000		ASTM D 2196
WORKING TIME, min	15-20		
GEL TIME, min	30-35		ASTM D 2471

Physical Properties:

COMPRESSIVE STRENGTH, psi (MPa)	17,000	*(117)*	ASTM D 695
COMPRESSIVE MODULUS, psi (MPa)	392,000	*(2,703)*	ASTM D 695
TENSILE STRENGTH, psi (MPa)	5,200	*(36)*	ASTM D 638
HEAT DISTORTION TEMPERATURE, °F (°C)	187	*(86)*	ASTM D 648
HARDNESS, Shore D @ 77 °F (25 °C)	*90*		ASTM D 2240
@ 300 °F (149 °C)	*65*		
IMPACT STRENGTH, Izod notched, in.- lb./in. (cm.kg/cm)	4.2	*(1.90)*	ASTM D 256
WATER ABSORPTION (30 days immersion @ 72 °F or 22 °C), %	0.27		ASTM D 570

Packaging:

Volume/kit:

22 lb: 373 in.^{3} = 6.11 l

50 lb: 847 in.^{3} = 13.88 l

Bulk quantities are available for automatic meter mixing/dispensing equipment applications.

Preparation:

1. Be sure that the backing surfaces are dry, free of rust, dirt, grease, and oil (See No. 3).
2. Assemble crusher parts in the usual manner.
3. Where bonding to a surface is not required, coat the surface with a light oil or a release agent. No grease/oil/release on wear parts.
4. Seal all gaps with clay, putty, or plaster to prevent leakage.
5. If the temperature is below 60 °F (16 °C) pre-heat the wear parts to bring the temperature above 60°F (16 °C). Do not pour Copps Backing into parts hotter than 150 °F (66 °C).

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.
2 - Nonyl Phenol is a Marine Pollutant and considered "Dangerous for the environment" per the EU directive 79/831/EEC.

Mixing:

The storage temperature of Copps Backing will greatly impact both the ease of pouring and the curing time. For best results, Copps Backing kits should be stored inside (60-80 °F or 16-27 °C) for at least 24 hours before use.

1. Mix and pour only 1 kit at a time to prevent Copps Backing from hardening in the container. Do not mix/use partial kits.
2. Open both containers and slowly pour the entire contents of the small can (hardener) into the larger pail (resin).
3. Mix using the mixing paddle in a low speed (500 RPM or less), heavy duty drill and mix the Copps Backing until a uniform color appears, normally 3-4 minutes, longer if backing is cold or "stiff."
4. ***Pour immediately*** into crusher voids.

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Curing Procedures:

Working time will depend on backing temperature, ambient temperature and temperature of parts. Typical working time at 72 °F (22 °C) is 20-25 minutes. Working time and viscosity increase as temperature decreases. With hotter temperatures you have less time to pour. 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 during the working time.

The cure time of Copps backing will depend greatly on the air temperature, the temperature of the concaves or mantle and the backing temperature. If the temperature is low, heat can be applied to the outside of the concaves or mantle to bring their temperature up to 60 °F (16 °C). Do not exceed 150 °F (66 °C).

Use the chart below only as a GUIDE for approximate curing time.

Temperature of bowls or mantles and backing, °F (°C)	Cure time from last pour to Crusher restart, hrs.
50 (10)	24
60 (16)	12
70 (21)	6
80 (27)	3
90 (32)	1½

SAFETY PRECAUTIONS

Mix and pour in a well-ventilated area. Avoid contact with skin and eyes. If contact does occur, wash skin with soap and water and seek medical help. Read and understand all CAUTIONS on container labels and safety data sheets before using this material.

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.**

FOR INDUSTRIAL USE ONLY

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