

## Copps XP-2000 High Performance Backing – K-085

|                             |   |         |         |             |
|-----------------------------|---|---------|---------|-------------|
| <b>Description:</b>         | The ultimate backing material for tough, demanding or troublesome crushing applications. Uniquely designed with extreme impact resistance, very low water absorption and the ability to withstand hard/abrasive media and high temperature crushing environments.   |         |         |             |
|                             | High performance Backing (XP-2000) does not contain VOC's, butyl glycidyl ether (BGE) <sup>1</sup> or nonyl phenol <sup>2</sup> .   |         |         |             |
| <b>Handling Properties:</b> | SPECIFIC GRAVITY, g/cm <sup>3</sup>   | 1.65    |         | ASTM D 792  |
|                             | DENSITY, lb./gal  | 13.8    |         | ASTM D 792  |
|                             | MIXED VISCOSITY, cP or mPa.s  | 7,500   |         | ASTM D 2196 |
|                             | WORKING TIME, min   | 20-25   |         |             |
|                             | GEL TIME, min   | 35-40   |         | ASTM D 2471 |
| <b>Physical Properties:</b> | COMPRESSIVE STRENGTH, psi (MPa)   | 18,000  | (124)   | ASTM D 695  |
|                             | COMPRESSIVE MODULUS, psi (MPa)  | 449,000 | (3,097) | ASTM D 695  |
|                             | TENSILE STRENGTH, psi (MPa)   | 5,500   | (38)    | ASTM D 638  |
|                             | HEAT DISTORTION TEMPERATURE, °F (°C)  | 200     | (93.3)  | ASTM D 648  |
|                             | HARDNESS, Shore D @ 77 °F (25 °C)   | 92      |         | ASTM D 2240 |
|                             | IMPACT STRENGTH, Izod notched, in.- lb./in. (cm.kg/cm)  | 4.9     | (2.23)  | ASTM D 256  |
|                             | WATER ABSORPTION  |         |         | ASTM D 570  |
|                             | 7 day immersion @ 72 °F or 22 °C, %   | 0.07    |         |             |
|                             | 30 day immersion @ 72 °F or 22 °C, %  | 0.25    |         |             |
| <b>Packaging:</b>           | Volume/kit:   |         |         |             |
|                             | 22 lb. (10 kg): 368 in. <sup>3</sup> = 6.03 l   |         |         |             |
|                             | 50 lb. (22.7 kg): 837 in. <sup>3</sup> = 13.72 l  |         |         |             |
|                             | Bulk quantities are available for automatic meter mixing/dispensing equipment applications.   |         |         |             |
| <b>Preparation:</b>         | <ol style="list-style-type: none"> <li>1. Be sure that the backing surfaces are dry, free of rust, dirt, grease, and oil (See No. 3).</li> <li>2. Assemble crusher parts in the usual manner.</li> <li>3. Where bonding to a surface is not required, coat the surface with light oil or a release agent. No grease/oil/release on wear parts.</li> <li>4. Seal all gaps with clay, putty, or plaster to prevent leakage.</li> <li>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).</li> </ol> |         |         |             |

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

<sup>2</sup> 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.

## Curing Procedures:

Working time will depend on backing temperature and ambient temperature. 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.**

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