

ARMOR PLATE - STEEL (HT)

K-064

GENERAL PRODUCT INFORMATION

Copps K-064 is a two-component steel filled adhesive/patching compound. Copps K-064 is designed for high temperature applications (450 °F or 232 °C), providing excellent adhesion, and thermal conductivity. It may be drilled, shaped or machined using conventional working tools and methods.

Copps K-064 is used to repair imperfections in steel castings and damaged mold or tool surfaces, to eliminate costly replacement and scrap.

TYPICAL HANDLING CHARACTERISTICS @ 72-77 °F

CONSISTENCY	Trowelable Paste
WORKING TIME*, min	90
CURING TIME**, h	12
MIXING RATIO, pbv (pbw)	4/1 (7.6/1)
KIT, VOLUME	20 lb. or 197 in. ³ (9.07 kg or 3,228 cm ³)

*The working time of K-064 will vary according to the ambient temperature, the temperature of the material itself and the surface to which it is applied.

**See application instructions.

TYPICAL PERFORMANCE CHARACTERISTICS

COMPRESSIVE STRENGTH, psi (MPa)	13,000 (89.7)	ASTM D 695
TENSILE STRENGTH, psi (MPa)	7,000 (48.3)	ASTM D 638
TENSILE SHEAR STRENGTH, psi (MPa)	3,500 (24.1)	ASTM D 1002
FLEXURAL STRENGTH, psi (MPa)	11,000 (75.9)	ASTM D 790
HARDNESS, Shore D	90	ASTM D 2240

APPLICATION INSTRUCTIONS

Step 1 - Surface Preparation

The surface to be coated must be free of all rust, scale, dirt, dust, grease, oil, release agents, or other contaminants. Preheat the surface to 100 °F or 38 °C (this will drive off any moisture). For smooth surfaces or where vibration is a concern, tack weld an open mesh screen or expanded metal approximately 1/16 to 1/8 in. (1.6-3.2 mm) above the surface. Chip off weld slag.

Step 2 - Measuring

Armor Plate-Steel kits are supplied with the resin and hardener pre-measured in the correct mixing ratio. It is best to empty the entire contents of both the resin and hardener containers on a mixing board to insure the proper mixing ratio is maintained. If less than a full kit is required for the job, both the resin and hardener **must be accurately** measured out. **DO NOT ATTEMPT TO "EYEBALL" THE AMOUNT NEEDED.** Use a scale to weigh out each component or use measuring cups to portion by volume. Adding more or less hardener will only degrade the physical properties.

If the kit is colder than 60 °F (15.5 °C), preheat both the resin and hardener by placing the cans in a hot water bath. The water temperature should not exceed 90 °F (32.2 °C) as higher heat will reduce the working time of the mix. Heating of the cans with a torch is **NOT** recommended.

Step 3 - Mixing

After the components have been measured on a clean, flat mixing board, mix thoroughly with a trowel until a uniform color is achieved, (usually about 2 minutes)

For mixing the largest kits, a mixing paddle and heavy duty, slow speed drill may be used. However, the mechanical energy put into the mix by the drill may result in a shortened working time and a reduction of the non-sag characteristics of the Armor Plate. Remember, incomplete mixing will result in poor curing, loss of physical properties, and "soft spots".

Step 4 - Application

Initially apply a thin, wet coat to the surface to create tack. Build upon the tack coat to the desired thickness. If a screen or expanded metal is used for reinforcement, apply an excess of material at one end of the area and push it through the screen. Push the material so that it "wets" the surface below the screen and moves in a continuous mass toward the other end of the area.

Step 5 - Curing Procedures - Armor Plate-Steel (HT)

For service up to 300 °F (149 °C) - Allow at least 8 hours to cure at 77 °F (25 °C) or higher. Then preheat for at least 3 hours at the peak operating temperature prior to start up.

For service above 300 °F (149 °C) - Allow 8 hours to cure at 77 °F (25 °C) or higher. Preheat 3 to 4 hours at 400 °F (204 °C) or peak operating temperature.

DO NOT EXCEED 450 °F (232 °C)

SAFETY PRECAUTIONS

SEE MSDS FOR COMPLETE SAFETY INFORMATION

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 NEAR OR ON, 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 material safety data sheets before using this material.

HMIS Classification - Resin: Health 2, Flammability 1, Reactivity 0; Hardener: Health 3, Flammability 1, Reactivity 0

FOR INDUSTRIAL USE ONLY

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TB#4064 (09/16/08)