COPPS® INDUSTRIES, INC.
An ISO 9001 Certified Company

10600 N. Industrial Drive
Mequon, WI 53092-4473
262-238-1700 (Tel.)
262-238-1701 (Fax)
www.coppsindustries.com

ARMOR PLATE - GRAPHITE

CASTING AND REPAIR COMPOUNDS

TROWELABLE (T) K-044
POURABLE (P) K-045
HIGH TEMPERATURE POURABLE (HT) K-003

GENERAL PRODUCT INFORMATION

Armor Plate - Graphite compounds minimize downtime and reduce cost for the replacement of bearing materials, such as lignum vitae. The three Armor Plate – Graphite products offer maximum versatility of installation techniques. Free-standing cast components are prepared easily and economically with Armor Plate - Graphite (P). Formed-in-place bearings, seals (or portions of them) can be made using either Trowelable (K-044) or Pourable Graphite (K-003, K-045). Armor Plate - Graphite compounds are tough, durable products that are field proven to provide excellent wear resistance.

HANDLING PROPERTIES @ 72-77 °F

	K-044 TROWELABLE (T)	K-045 POURABLE (P)	K-003 POURABLE (HT)
MIX RATIO, pbv (pbw)	2.7/1 (2.2/1)	5/1(7/1)	3.8/1 (5.5/1)
CONSISTENCY	Non-sag paste	Viscous liquid	Viscous liquid
VISCOSITY, cP	N/A	9,000	4,500
WORKING TIME*, min	40	30	30
CURING TIME**, h	8	8	12

*The working time of Armor Plate-Graphite (the time the material can be used before it sets) will vary according to the temperature of the air, the material itself, and the surface to which it is applied.

For reliable results the curing time should be 24 hours @ 70-80 °F. At cooler temperatures, a longer curing time should be allowed (approximately 48 hours). Curing procedures may be shortened by applying heat with a hot air blower or heat lamps. **DO NOT EXCEED 120 °F.

TYPICAL CHARACTERISTICS @ 72-77 °F

HARDNESS, Shore D	80	80	85	ASTM D 2240
CURED DENSITY, lb/gal (g/cm^3)	12.6 (1.51)	10.3 (1.24)	9.9 (1.19)	
COMPRESSIVE STRENGTH, psi	10,000	12,000	9,000	ASTM D 695
ADHESIVE BOND STRENGTH, psi	2,000	1,800	2,100	ASTM D 1002
COEFFICIENT OF FRICTION	0.27	0.27	0.27	
MAXIMUM SERVICE TEMP., °F	250	250	350	

PACKAGING CONVENIENCE

KIT: VOLUME, in.^{3}	1.0 lb: 18 7.8 lb: 140	--- 8.0 lb: 180	--- 8.3 lb: 194

APPLICATION INSTRUCTIONS

STEP 1 - Surface Preparation
Where adhesion is desired, the surface must be free of all rust, scale, dirt, grease, oil, release agents, or other contaminants. For molding or casting purposes, the surface should be coated with a release agent. Many waxes or greases are suitable for non-critical appearance uses. If the molded surface is important, a commercially available release coating should be used.

STEP 2 - Measuring
Armor Plate kits are supplied with the resin and hardener pre-measured in the correct mixing ratio. It is best to empty the entire contents of the hardener container into the resin container to insure that the proper ratio is maintained.

If less than a full kit of Armor Plate is required for the job, both the resin and hardener **must** be **accurately** measured out. **DO NOT ATTEMPT TO "EYEBALL" THE AMOUNTS NEEDED.** Use a scale to weigh out each component or use measuring cups to measure by volume. Adding more or less hardener will only degrade the physical properties.

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

STEP 3 - Mixing
Trowelable (T)
Mix the components on a clean flat board with a trowel until the mixture becomes a uniform color (about 2 minutes). For mixing the largest kit, 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 lessening of the non-sag characteristics of the Armor Plate.

Pourable (P) and (HT)
Mix the components with a heavy stir stick, mixing paddle, slow speed drill, or trowel until uniform in color (about 2 minutes). Scrape the sides and bottom of the container to insure all the material is mixed. Remember, incomplete mixing will result in poor curing, loss of physical properties, and "soft spots".

NOTE: DO NOT POUR IN CROSS SECTIONS GREATER THAN 1". LARGE CASTINGS MUST BE POURED LESS THAN 1" AT A TIME TO PREVENT EXCESSIVE HEAT BUILD-UP.

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 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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