

Armor Plate Wear Compound – Silicon Carbide – K-931

Description:	Armor Plate - Silicon Carbide is a trowelable, two-component, silicon carbide filled epoxy system specifically designed to resist abrasive wear and corrosion. Armor Plate - Silicon Carbide can be applied to badly worn areas or in areas with severe wear, forming a tough high-performance barrier. Armor Plate - Silicon Carbide adheres to most metals and cast silicon carbide substrates found in harsh processing environments.		
Ordering Information:	K-931-21.5 (21.5lb Unit)		
Product Advantages:	Smooth Non-Sag Consistency Excellent Sliding Abrasion Wear Protection Spreads Easily, Filling Holes, Gouges and Worn Areas in One Application		
Application Guidelines:	MAXIMUM SERVICE TEMP 200°F WORKING TIME 30 minutes @ 72F FUNCTIONAL CURE 7 Hours MIX RATIO 2/1 by Volume (2/1 by weight)		
Coverage:	Coverage per pound is 26in² (168cm²) at 0.5" (1.27cm) thickness. The working time of Armor Plate - Silicon Carbide (the time you have to apply the material before it sets) will vary according to air temperature, the temperature of the material itself, and the surface to which it is applied.		
Physical Properties:	TENSILE STRENGTH	3,050 psi	<u>Tests Conducted</u> ASTM D 638
	COMPRESSIVE STRENGTH	14,000 psi	ASTM D 695
	WEAR RESISTANCE (weight loss) %	0.5	
	HARDNESS, Shore D		ASTM D 2240
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.		
Measuring:	Armor Plate - Silicon Carbide 2/1 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.		

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 - Silicon Carbide. Remember, incomplete mixing will result in poor curing, loss of physical properties, and "soft spots".

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.

**Curing
Procedures:**

Cure at least 7 hours at 77°F (25°C) before returning equipment to service. For maximum physical properties cure 4 hours at 200 °F (93.3°C) after curing 2 hours at 72°F (22°C).

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 safety data sheets before using this material.

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