



PRODUCT DATA SHEET: CERAM-KOTE SPG 1:1

Description: CeRam-Kote SPG 1:1 is a technically advanced ceramic, 100% novolac epoxy material that has been designed to be a high-build corrosion barrier as well as use for patching severe pitting in steel, spalling and cracks in concrete floors and walls where corrosion and chemical attack are problems. CeRam-Kote SPG 1:1 may be applied in thickness of 15 mils (375 microns) to 3/4" (750 mils, 19 mm) thick. CeRam-Kote SPG 1:1 is 100% solids by volume and provides a non-shrinking surface after application.

CeRam-Kote SPG 1:1 is ideal for high abrasion, erosion, and corrosion environments in both critical and non-critical areas. Specially formulated to repair pitted metal and concrete, CeRam-Kote SPG 1:1 also works extremely well on new construction applications with outstanding adhesion to virtually all substrates, including fiberglass and aluminum. CeRam-Kote SPG 1:1 provides excellent corrosion resistance to a wide variety of environments.

CeRam-Kote SPG 1:1 reduces labor costs through its quick application versus other high build products. Designed as a one-coat application, CeRam-Kote SPG 1:1 may be used as a stand-alone system or in conjunction with other Freecom coating materials. CeRam-Kote SPG 1:1 is available in grey or black. Specialty colors can be formulated.

Suggested Uses:	Tanks and Processing Vessels	Pump Impellers	Ship Decks
	External Pipeline Protection	Pitted Steel Surfaces	Tile Sealer
	Cooling Tower Concrete Walls and Floors	Dredge Equipment	Ship Hulls
	Power Poles	Fuel Tanks	Ballast Tanks
	Saltwater Storage Tanks		

TECHNICAL DATA

Number of Coats:	One
Volume Solids:	100%
Salt-Fog Resistance:	Over 10,000 hours with no blisters / undercreep (ASTM B-117 – ongoing)
Adhesion:	2700 psi (18.61 MPa) (ASTM 4541)
Abrasion Resistance:	36 mg loss using a CS-17 wheel and 1 kg load (ASTM D4060)
Direct Impact Resistance:	48 inch-pounds at 25-30 mils (ASTM D2794)
Compressive Strength:	16,000 psi (110.2 MPa) (ASTM D695)
Tensile Strength:	6200 psi (42.8 MPa) – 25-30 mils at 73°F (23°C)(ASTM C307)
Flexibility:	1% elongation at 37°F (NACE RP0394-94)
Porosity:	25-30 mils - Cross Section Porosity Rating: 1 (pass) (NACE RP0394-94)
Minimum/Maximum Dry Thickness:	CeRam-Kote SPG 1:1 may be applied at a minimum thickness of 15 mils (375 microns) to a maximum thickness of 750 mils (19mm or 3/4 inch).
Coverage:	Theoretical coverage is 107 sq. ft. (10 sq. m.) per gallon at 15 mils (375 microns), or 32 sq. ft. (3 sq. m.) per gallon at 50 mils (1.25 mm).
Cure Time:	CeRam-Kote SPG 1:1 will cure in one to three (1-3) hours depending on the temperature and applied thickness.
Color:	Part A is white. Part B is gray or white.
Surface Preparation:	Proper surface preparation is critical to the long-term performance of the product. Optimum preparation will provide a surface free of oil, grease and salt/chloride contamination with an anchor profile of 3-4 mils (75-100 microns). This is normally achieved by abrasive blasting to a NACE-1 (SSPC-SP5, Swedish Sa-3) white metal finish and no less than a NACE-2 (SSPC-SP10, Swedish Sa-2½) near-white metal cleanliness. Grinding to a rough finish and solvent wash is acceptable, but a subsequent lowering of adhesion will result.

Mixing:	<p>IF brush, roll, or rake: Mixing and application should be accomplished at air temperatures between 40°-100°F (4.4°-37.8°C). Each kit has been packaged with the proper mix ratio of 1:1 by volume. Once product has been catalyzed, pour onto area to be coated. Pot life is very quick (10 minutes) if left inside the can. Once product has been poured onto area to be coated, the product has approximately 30 minutes working life.</p> <p>IF spray applied: Spray Application can be applied using airless equipment with at least 30:1 pump size. Normal airless spray requires the addition of up to 5% CeRam-Kote Thinner 3 for proper spray atomization. Heated plural component application is recommended. Contact Freecom Technical Support for further information</p>
Mixing Ratio:	<p>One (1) part Component B to one (1) part Component A by volume. One (1) part Component B to one (1) part Component A by weight.</p>
Shelf Life:	<p>Keep cans out of direct sunlight to prevent heat buildup. If stored in a dry enclosed area under 95°F (35°C), CeRam-Kote SPG 1:1 has an indefinite shelf life. However, it is recommended that CeRam-Kote SPG 1:1 be used within two (2) years of delivery.</p>
Application:	<p>Application may be accomplished at a minimum temperature of 40°F (4.4°C). If brushing, rolling, or raking material, press the material into the surface profile to completely wet out the substrate. On a flat surface, CeRam-Kote SPG 1:1 may be applied at a minimum of 10 mils (250 microns) to a maximum of 25 mils (625 microns) thickness in a single application provided runs or sags do not occur. On vertical surfaces, avoid sliding, runs or sags by applying thin, multiple layers to achieve the desired thickness of 15 mils (375 microns) up to a total thickness of 50 mils (1.25 mm). Contact Freecom technical support for more information. The material may be smoothed using a variety of methods similar to concrete surface finishing.</p> <p>If application will be done by spray, use at least a 30:1 airless pump. The addition of 5% CeRam-Kote Thinner 3 is recommended for normal airless spray application. Heated plural component spray application is recommended for 100% solids application. Heat both A and B to 90°F (32°C). Use a 0.021" fluid tip. At least 2,000 psi on each pump is required.</p> <p>CeRam-Kote SPG 1:1 may be machined with grinders or other hand tools if necessary after curing to produce the desired surface prior to applying any CeRam-Kote or CeRam-Thane topcoat. CeRam-Kote SPG 1:1 may be topcoated as soon as it is dry to the touch which, depending on temperature is one to three (1-3) hours. CeRam-Kote SPG 1:1 and CeRam-Kote or CeRam-Thane topcoat may be placed into service within twenty-four (24) hours if cured at 70°F (21.1°C) depending on service environment. Lower temperatures require longer cure times and higher temperatures require shorter cure times.</p>
Climate:	<p>Use CeRam-Kote SPG 1:1 only if the substrate temperature and ambient air temperature are above 40°F (4.4°C). No coating should be permitted when the substrate is wet from rain or dew, when surfaces are less than five degrees Fahrenheit (three degrees Celsius) above the dew point and holding or when relative humidity is greater than 85%.</p>
Repairs:	<p>CeRam-Kote SPG 1:1 must be abraded prior to repair. Call Freecom Technical Support for repair recommendations.</p>
Packaging:	<p>CeRam-Kote SPG 1:1 is packaged in one quart, one gallon, or 30-gallon kits.</p>
Cleanup:	<p>Use CeRam-Kote Thinner 1 to clean tools immediately after application. If CeRam-Kote SPG 1:1 is allowed to cure on tools, it must be abraded off.</p>
Safety:	<p>Safe storage, handling and use dictate that adequate health and safety precautions be observed with this product. User is specifically directed to consult the current Material Safety Data Sheet for this product as well as precautions contained on product labeling. CeRam-Kote SPG 1:1 should be stored below 95°F (35°C) and kept out of direct sunlight.</p>
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6/6/05