PRODUCT DATA SHEET: CERAM-KOTE SPG89

Description: CeRam-Kote SPG89 is a technically advanced ceramic, 100% novolac epoxy material that has been designed to be a high-build corrosion barrier. CeRam-Kote SPG89 may be applied in thickness of 30 mils (750 microns). CeRam-Kote SPG89 is supplied as a 100% solids by volume and provides a non-shrinking surface after application.

CeRam-Kote SPG89 is ideal in brushing or rolling applications due to its leveling properties, which gives the finished coating a very smooth surface. CeRam-Kote SPG89 is specially formulated to reduce labor costs through its quick one-coat application versus other high build products. CeRam-Kote SPG89 may be used as a stand-alone system or in conjunction with other Freecom coating materials. CeRam-Kote SPG89 is available in grey.

Suggested Uses:

Tanks and Processing Vessels		Pump Impellers	Ship Decks
External Pipeline Protection		Pitted Steel Surfaces	Tile Sealer
External Pipeline Protection		Cooling Tower	Concrete Walls and Floors
Dredge Equipment		Secondary containment	Waste water treatment plants

TECHNICAL DATA

Number of Coats:	One	
Volume Solids:	100%	
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:	15,986 psi (110 MPa)	(ASTM D695)
Tensile Strength:	6,207 psi (42.8 Mpa)	(ASTM D638)
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 SPG89 may be applied at a minimum thickness of 30 mils (750 microns) to a maximum thickness of ½-inch (13 mm).

Coverage: Theoretical coverage is 53 ft^2 (5 m^2) per gallon at 30 mils (750 μm) and 40 ft^2 (3.7 m^2) per gallon at 40 mils (1000 μm).

Cure Time: 3 to 7 days depending on ambient temperature.

Color: Gray.

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. **If steel or aluminum** is the substrate, 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.

Concrete: Concrete surfaces shall be abrasive blasted to remove all surface contaminants and laitance. The prepared concrete must have a surface profile equal to 40-60 grit sandpaper. After initial preparation has occurred, inspect the concrete for bug holes, voids, fins and other imperfections. Protrusions shall be ground smooth while voids shall be filled with system compatible filler. For recommendations, contact Freecom's Technical Support. Prepare the surface with a "blast-track" unit, scarifier or by grinding. The substrate should be free of oil, grease and salt/chloride contaminants. Cleanliness is the mort important step to produce a surface that will perform or last.

Mixing:

IF brush, roll, trowel, 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 7:1 by volume. For longest working pot life, remove Part A (gray) from can and place on a mixing board and add Part B. Using a metal or plastic trowel, mix the two components together until no streaks exist and a consistent gray color is achieved. Spread the mix into a thin layer and use accordingly. If mix is left in a mass, an exothermic reaction will take place, drastically reducing pot life.
IF spray applied: Spray Application can be applied using airless equipment with at least 33:1 pump size. Normal airless spray requires the addition of 5% to 10% solvent for proper spray atomization. Heated plural component application is recommended. Contact Freecom Technical Support for further information

Mixing Ratio:

One (1) part Component B to three (3) parts Component A by volume.
One (1) part Component B to five (5) parts Component A by weight.

Shelf Life:

Keep cans out of direct sunlight to prevent heat buildup. If stored in a dry enclosed area under 95°F (35°C), CeRam-Kote SPG89 has an indefinite shelf life. However, it is recommended that CeRam-Kote SPG89 be used within two (2) years of delivery.

Application:

Application may be accomplished at a minimum temperature of 40°F (4.4°C). If troweling material, press the material into the surface profile to completely wet out the substrate. On a flat surface, CeRam-Kote SPG89 may be applied at a minimum of 30 mils (750 microns) to a maximum of 40 mils (1000 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 (15 mils, 375 microns) to achieve the desired thickness of 30 mils (750 microns) up to a total thickness of 40 mils (1000 microns). Contact Freecom technical support for more information. The material may be smoothed using a variety of methods similar to concrete surface finishing.

If application will be done by spray, use at least a 60:1 airless pump. The addition of 5% solvent is recommended for normal airless spray application. Heated plural component spray application is recommended for 100% solids application. Heat A to 150°F (65°C). Use a 0.025" fluid tip. At least 3,500 psi on each pump is required.

CeRam-Kote SPG89 may be machined with grinders or other hand tools if necessary after curing to produce the desired surface prior to applying any other CeRam-Kote product as a topcoat. CeRam-Kote SPG89 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 SPG89 and other CeRam-Kote products 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.

Climate:

Use CeRam-Kote SPG89 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%. Moisture will inhibit the catalyst reaction and CeRam-Kote SPG89 will not cure or perform properly.

Repairs:

CeRam-Kote SPG89 must be abraded prior to repair. Call Freecom Technical Support for repair recommendations.

Packaging:

CeRam-Kote SPG89 is packaged in one quart, one gallon, or 5-gallon kits.

Cleanup:

Use Acetone or MEK to clean tools immediately after application. If CeRam-Kote SPG89 is allowed to cure on tools, it must be abraded off.

Safety:

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 SPG89 should be stored below 95°F (35°C) and kept out of direct sunlight.

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8/28/03