



THE *SPRAYABLE* GROUT

- 100% Solids
- High Build Corrosion Barrier
- Ceramic Novolac Epoxy Technology
- Encapsulating Ceramic Shell
- Non-shrinking Surface after Application
- Ideal for High Abrasion, Erosion and Corrosion Environments
- No VOCs
- Solvent-free Specially Formulated to Repair Pitted Metal and Concrete
- Great for New Applications (i.e., storage tanks, pipelines)
- Outstanding Adhesion to Virtually All Substrates
- Speed of Application
- Can be Applied 40 mils thick in One Pass
- Superior Turnaround Time
- Outstanding Field Results
- Excellent Test Results (i.e., Cathodic Disbondment 100 Times Better than Conventional Fusion Bonded Epoxy Coatings)





PRODUCT DATA SHEET: CERAM-KOTE SPG

Description: CeRam-Kote SPG 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 may be applied in thickness of 15 mils (375 microns) to 3/4" (750 mils, 19 mm) thick. CeRam-Kote SPG is 100% solids by volume and provides a non-shrinking surface after application.

CeRam-Kote SPG 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 also works extremely well on new construction applications with outstanding adhesion to virtually all substrates, including fiberglass and aluminum. CeRam-Kote SPG provides excellent corrosion resistance to a wide variety of environments.

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

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

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 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 25 sq. ft. (2.3 sq. meters) per gallon at 63 mils (1/16" or 1.6 mm) and 2 sq. ft. (0.1858 sq. meters) per gallon at 750 mils (3/4" or 19mm).
Cure Time:	CeRam-Kote SPG should cure out in one to three (1-3) hours depending on the temperature and applied thickness.
Color:	Part A is gray or black. Part B is amber.
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, 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.</p> <p>IF spray applied: Spray Application can be applied using airless equipment with at least 60:1 pump size. Normal airless spray requires the addition of 5% to 10% solvent for proper spray atomization. Heated plural component application is recommended. Contact CERAM-KOTE COATINGS' Technical Support for further information</p>
Mixing Ratio:	<p>One (1) part Component B to seven (7) parts Component A by volume. One (1) part Component B to eleven (11) parts 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 has an indefinite shelf life. However, it is recommended that CeRam-Kote SPG 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 troweling material, press the material into the surface profile to completely wet out the substrate. On a flat surface, CeRam-Kote SPG may be applied at a minimum of 15 mils (375 microns) to a maximum of 750 mils (19 mm or 3/4 inch) 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 750 mils (19 mm or 3/4 inch). Contact CERAM-KOTE COATINGS' 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 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 both A and B to 150°F (65°C). Use a 0.025" fluid tip. At least 3,500 psi on each pump is required.</p> <p>CeRam-Kote SPG may be machined with grinders or other hand tools if necessary after curing to produce the desired surface prior to applying CeRam-Kote 54® as a topcoat. CeRam-Kote SPG 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 and CeRam-Kote 54® 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 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 SPG will not cure or perform properly.</p>
Repairs:	<p>CeRam-Kote SPG must be abraded prior to repair. Call CERAM-KOTE COATINGS' Technical Support for repair recommendations.</p>
Packaging:	<p>CeRam-Kote SPG is packaged in one quart or one gallon kits. Each kit consists of a gallon or quart can of Part A (Base) and a container of Part B (Curing Agent).</p>
Cleanup:	<p>Use CeRam-Kote Thinner 1 or CeRam-Kote Thinner 2 to clean tools immediately after application. If CeRam-Kote SPG 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 should be stored below 95°F (35°C) and kept out of direct sunlight.</p>
Notice:	<p>The information, data and suggestions contained herein are believed to be reliable, based upon our knowledge and experience; however it is expressly declared that Seller does not guarantee the result to be obtained in Buyer's process. SELLER HEREBY EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY FOR FITNESS FOR A PARTICULAR PURPOSE AND/OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED as to any and all products and/or suggestions described herein, whether such products are used alone or in combination with other materials. Buyer must make its own determination of the suitability of any product for its use and the completeness of any information contained herein. Buyer must make its own determination of the suitability of the product for its use, and the completeness of any information contained herein. Licensed applicators are independent contractors and are not agents or employees of Freecom.</p>



PHYSICAL PROPERTIES—TEST DATA	
Adhesion (ASTM D4541, elcometer pull-off)	>2,700 psi (18.61 MPa)
Abrasion Resistance (ASTM D 4060, Tabor Test 1,000 cycles, CS 17 wheel, 1kg)	36 milligrams loss
Direct Impact Resistance (ASTM D 2794)	48 inch-pounds at 25-30 mils
Salt Fog Resistance (ASTM B117) - test ongoing	Over 10,000 hours with no blisters/undercreep
Compressive Strength (ASTM D 695)	16,000 psi (110.2 MPa)
Tensile Strength (ASTM C 307)	6,200 psi (42.8 MPa) - 25-30 mils at 73°F (23°C)
Cathodic Disbondment (NACE RP0394-94)	Disbonded Radius: 5.00 mm avg. at 38.3 mils
Flexibility (NACE RP0394-94)	1% elongation at 37°F (3°C)
VOC (Volatile Organic Compounds)	zero

CeRam-Kote SPG Chemical Resistance Chart

KEY

Y = Immersion Service
 N = Not Recommended
 = Not Tested

These tests have been conducted on cold rolled steel 1"x6"x¼" panels that have been surface prepared to SSPC-SP5 (NACE 1) white metal blast and spray coated with 15-20 mil DFT (375-500 µm) of CeRam-Kote SPG. The coated panels are cured at 200°F (93.3°C) for 2 hours before testing commences.

Under certain corrosive conditions, pigment might change color without affecting physical properties of the coating. Note the comment box for additional information regarding a given chemical.

Substance Exposed To:	100°F (37.8°C) 30 DAYS	100°F (37.8°C) 60 DAYS	100°F (37.8°C) 90 DAYS	130°F (54.4°C) 30 DAYS	130°F (54.4°C) 60 DAYS	130°F (54.4°C) 90 DAYS	160°F (71.1°C) 30 DAYS	160°F (71.1°C) 60 DAYS	160°F (71.1°C) 90 DAYS
1,2 Dichloroethane	Y	Y	Y	Y	Y	Y	Y	Y	Y
Acetic acid - 10%	N	N	N	N	N	N	N	N	N
Acetone	Y	Y	Y						
Ammonia - 10%	Y	Y	Y	N	N	N	N	N	N
Ammonia (Liquid)	N	N	N	N	N	N	N	N	
Anilene	N	N	N	N	N	N	N	N	N
Benzene	Y	Y	Y						
Brine (Saturated)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bromine water - 5%	N	N	N	N	N	N	N	N	N
Carbon dioxide	Y	Y	Y	Y	Y	Y	Y	Y	Y
Carbonic acid	Y	Y	Y	N	N	N	N	N	N
Calcium chloride (Saturated)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Calcium hypochlorite - 15%	N	N	N	N	N	N	N	N	N
Calcium sulfate	Y	Y	Y	Y	Y	Y	Y	Y	N
Chlorine water (Saturated)	N	N	N	N	N	N	N	N	N
Clorox	N	N	N	N	N	N	N	N	N
Citric Acid - 5%	N	N	N	N	N	N	N	N	N
Coconut oil	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detergent (Mr. Clean)	Y	Y	Y	Y	Y	Y	Y	N	N
Diesel fuel	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ethanol	Y	Y	Y	N	N	N	N	N	N
Ethanolamine	N	N	N	N	N	N	N	N	N
Ethyl benzene	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ethylene glycol	Y	Y	Y	Y	Y	Y	N	N	N
Formaldehyde - 37%	N	N	N	N	N	N	N	N	N
Gasoline (93 Octane)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hexane	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hydraulic fluid	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hydrochloric acid - 10%	N	N	N	N	N	N	N	N	N
Hydrochloric acid - 20%	N	N	N	N	N	N	N	N	N
Hydrochloric acid - 37%	N	N	N	N	N	N	N	N	N
Hydrofluoric acid - 10%	N	N	N	N	N	N	N	N	N
Isopropanol	N	N	N	N	N	N	N	N	N
Lactic acid - 5%	N	N	N	N	N	N	N	N	N
Magnesium chloride	Y	Y	Y	Y	Y	Y	Y	Y	Y
Methanol	N	N	N	N	N	N			
Methyl ethyl ketone	Y	Y	Y	Y	Y	Y	Y	Y	Y
Methyl isobutyl ketone	Y	Y	Y	Y	Y	Y	Y	Y	Y
Methylene chloride	N	N	N	N	N	N	N	N	N

