PRODUCT DATA SHEET: CERAM-KOTE 2000

Description: CeRam-Kote 2000 is a thin-film, spray-applied and air-dried ceramic novalac epoxy coating system engineered to provide excellent **chemical immersion service** protection to all metals, fiberglass reinforced plastics, concrete and plastic substrata. CeRam-Kote 2000 is highly cross-linked to provide superior chemical resistance. The product may be force-cured with heat for enhanced performance in extremely harsh environments. CeRam-Kote 2000 is available in three colors: white, grey and tan. The CeRam-Kote 2000 formula has an ABS Certificate of Design Assessment #05-HS487406-PDA.

Suggested Uses:

- Internals in Tanks
- Harsh Chemical Environments
- Secondary Containment
- Clarifiers
- Non-UV Areas
- Internals in Vessels and Piping
- Internals in Valves
- Fuel Tanks
- Hydrocarbon Service
- Blow Out Preventers
- Petrochemical Environments
- Wastewater Treatment Clarifiers
- Wastewater Treatment Pumps
- Wastewater Treatment Lift Stations
- Brine Tanks
- Non-potable water tanks

TECHNICAL DATA

Volume Solids: 83% +/- 2%

Weight Solids: 93% +/- 2%

VOC: 0.74 lb/gal (89 g/l)

Number of Coats: One coat, two passes, with each pass 6-8 mils (150-200 microns) WFT

Dry Film Thickness: CeRam-Kote 2000 should be applied holiday free at a minimum of 10 mils (250 microns) DFT with a maximum thickness of 15 mils (375 microns) DFT.

Cure Time: A two-pass film of 8-10 mils DFT (200-250 microns) air dries to a dry touch finish within five (5) hours at 72°F (22.2°C) and dries to a 70% cure in fourteen (14) hours. Cure times lengthen at lower temperatures and shorten at higher temperatures. The coating should be fully cured before placing into service.

Surface Preparation: Bonding strength depends on proper preparation of the surface to be protected for long-term performance of the product. The substrate should be free of oil, grease and salt/chloride contamination. Specifications call for a white metal (NACE 1, SSPC-SP5, Swedish Standards SA-3) finish with a 2.0-2.5 mil (50 - 62.5 microns) anchor profile. Surface preparation should be no less than a near white metal (NACE 2, SSPC-SP10, Swedish Standards SA 2 ½) finish. Cleanliness is the most important step to produce a coated surface that will perform and last. Call Freecom, Inc. for surface preparation recommendations of materials such as aluminum, brass, plastic, fiberglass and/or concrete.

Mixing Ratio: Four (4) parts of Part A to one (1) part of Part B by volume.
Seven (7) parts of Part A to one (1) part of Part B ratio by weight.

Mixing: CeRam-Kote 2000 contains a high loading of ceramic particles which must be placed into full suspension with the epoxy resin prior to application. CeRam-Kote 2000 is packaged in two cans, Part A (base) and Part B (curing agent). Shake Part A (base) with a Cyclone air-powered shaker or mix Part A with a paddle mixer until all ceramic powders are suspended in the resin. Time required to place ceramics into suspension varies according to temperature and length of material storage time. At 72°F (22.2°C), generally a four (4) to six (6) minute shake will place the ceramic powders into suspension. **Regardless of time needed, shake all ceramic material into suspension prior to proceeding.** Failure to properly mix will keep CeRam-Kote 2000 from performing or curing properly. Check the can to assure all solids are in suspension prior to proceeding to the mixing step.

Combine Part A (base) and Part B (curing agent) and ***stir*** again until both parts are thoroughly mixed.

Pot Life & Shelf Life:

Pot life for CeRam-Kote 2000 at 72°F (22.2°C) is approximately one (1) hour. Colder temperatures will increase the pot life and warmer temperatures will decrease the pot life. Keep cans out of direct sunlight to prevent heat buildup. CeRam-Kote 2000 has an indefinite shelf life. Preferred storage/usage is a dry enclosed area under 85°F (29°C) /used within two (2) years. However, if stored more than two years above 85°F (29°C), call Freecom Technical Support prior to use.

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Thinning:

Adjust viscosity with small amounts of CeRam-Kote Thinner 1 or CeRam-Kote Thinner 3. Use caution when adjusting the viscosity. A little goes a long way. Only a small portion of the total solution is epoxy resin and the resin is the only ingredient that can be thinned. Thinning dilutes the high solids of CeRam-Kote 2000, creates excessive overspray and can cause some color changes in bright colors.

Application:

Spray apply for best results using conventional, airless, HVLP or cup gun. **The air source must be dry.** The compressed air source should be outfitted with air dryers as needed to supply moisture-free air. Use pressure feed equipment such as high volume, low pressure equipment or conventional equipment. Airless: use reversible carbide tip with orifice size of 0.019-0.021 inches. If applying with roller, use short nap, such as ¼" (.244 mm).

After thoroughly stirring CeRam-Kote 2000, strain it with a standard paint strainer and pour CeRam-Kote 2000 into the spray equipment.

Apply a first pass of six (6) to eight (8) mils (150 - 200 microns) WFT and allow sufficient time for solvent to flash off. At 72°F (22.2°C), 30-40 minutes is sufficient. Apply a second pass of six (6) to eight (8) mils (150 - 200 microns) for a total DFT of ten (10) to fifteen (15) mils (250 - 375 microns). Cure time is temperature dependent.

Apply additional mils without incurring runs or sags if the finished product requires thicker coverage. Whenever possible, apply second coat in a cross-coat method.

Climate:

Use CeRam-Kote 2000 only if the substrate temperature and ambient air temperature is above 40°F (4.4°C). No coating should be permitted when substrate is wet from rain or dew, when surfaces are less than 5°F (3°C) above the dew point and holding or when relative humidity is greater than 85%. Moisture will inhibit the catalyst reaction and CeRam-Kote 2000 will not cure or perform properly.

Holiday Detection:

CeRam-Kote 2000 is classified as a thin-film coating and should be tested for defects and holidays using a 67½ volt, wet sponge spark detector set at 80,000 ohms resistance, such as a Tinker and Rasor model M-1.

Repairs:

If application of the coating is less than seventy-two (72) hours old and has not been exposed to contamination, repair by wiping with CeRam-Kote Thinner 1 or CeRam-Kote Thinner 3 and then re-apply CeRam-Kote 2000. If contaminated or more than 72 hours old, first sand with appropriate grit sandpaper, then repeat repair process.

Cleanup:

Purge and clean spray equipment within thirty (30) minutes of the final spray. Flush equipment with CeRam-Kote Thinner 1 or CeRam-Kote Thinner 3 until solvent sprays clear. Disassemble and clean equipment to manufacturer's recommendations. Material left in spray equipment will solidify and damage equipment. Use precautionary measure applicable to any catalyzed material.

Safety:

See individual product label for safety and health data. A Material Safety Data Sheet is available upon request.

8/22/05