PRODUCT DATA SHEET: CERAM-KOTE MARINE AF

Description: CeRam-Kote Marine AF is polymer coating system that utilizes Zinc Oxide and is recommended for immersion service in a marine environment. CeRam-Kote Marine AF is available in a variety of colors. Fast, one coat application. No primer needed. Must be topcoated when aesthetics are an issue.

Suggested Uses: Marine applications

Volume Solids (catalyzed): 85% +/- 2%

VOC: 1.65 lb/gal (198 g/liter) less water

Number of Coats: One Coat, two passes (each pass 4½-6 mils WFT, 112½ -150 microns)

Dry Film Thickness: CeRam-Kote Marine AF should be applied holiday-free at a minimum of 7 mils (175 microns) with a maximum thickness of 10 mils (250 microns).

Cure Time: A two-pass film of 7-10 mils DFT (175-250 microns) air dries to a touch-dry finish within four (4) hours at 72°F (22.2°C) and dries to a 70% cure in seventeen (17) hours. Cure times lengthen at lower temperatures and shorten at higher temperatures. Coating should be fully cured before placing into service.

Surface Preparation:

Iron & Steel – Remove all loose rust, dirt, moisture, grease and soluble salts from surface. Power-tool clean (SSPC-SP3) or hand-tool clean (SSPC-SP2). For more severe environments, dry abrasive blast (SSPC-SP7). Water blasting is also acceptable to SSPC-D-Vis-WJ-3-H. For immersion service, dry abrasive blast SSPC-SP10 and achieve a 2-mil (50 micron) anchor profile. Prime any bare steel within 8 hours or before flash rusting occurs.

Aluminum – Remove all oil, grease, dirt, oxide, soluble salts, and other foreign material by solvent cleaning per SSPC-SP1. Power-tool clean (SSPC-SP3) or hand-tool clean (SSPC-SP2). For more severe environments, dry abrasive blast (SSPC-SP7). Water blasting is also acceptable to SSPC-D-Vis-WJ-3-H. For immersion service, dry abrasive blast SSPC-SP10 and achieve a 2-mil (50 micron) anchor profile. Prime any bare steel within 8 hours or before flash rusting occurs.

Galvanized Steel – Allow to weather a minimum of six months prior to coating. Remove all oil, grease, dirt, oxide, soluble salts, and other foreign material by solvent cleaning per SSPC-SP1 (recommended solvent is VM&P Naptha). When weathering is not possible or the surface has been treated with chromates or silicates, first solvent clean per SSPC-SP1 and apply a test patch. Allow CeRam-Kote® to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments.

Fiberglass - New surface: For new fiberglass, clean and wipe all surfaces with Acetone or Methyl Ethyl Ketone (MEK) prior to profiling to remove mold release agents, wax and contamination prior to abrading. Fiberglass and composite materials must have a water content of less than 5%. Rough or abrade with 80-grit to 100-grit sandpaper. Remove contamination via pressure washer or solvent wipe before coating application. Old Surface: When preparing old or previously used fiberglass, composite, or plastic material, it is important to clean the substrate to ensure all contaminants are removed before abrading. Ceram-Kote recommends hot water pressure washing (at least 3,000 psi) using trisodium phosphate or detergent. Allow to dry. Rough up or abrade with 40-grit to 80-grit sandpaper. If fiberglass is previously coated with Ceram-Kote, abrade with 100-grit sandpaper (as in section 6.0).

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 by weight

Mixing:

CeRam-Kote Marine AF contains a high loading of ceramic particles which must be placed into full suspension with the polymer resin prior to application. CeRam-Kote Marine AF is packaged in two cans, Part A (resin and ceramics) and Part B (curing agent). Shake Part A (coating) with a Cyclone air-powered shaker or mix Part A with a paddle mixer until all ceramic particles 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 particles into suspension. **Regardless of time needed, shake all ceramic material into suspension prior to proceeding.** Failure to properly mix will keep CeRam-Kote Marine AF 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 (coating) and Part B (curing agent) and ***stir*** until both parts are thoroughly mixed. Shaking can cause excessive heat to build up, thus causing curing problems. Stirring time is temperature dependent, but it should take only three (3) to four (4) minutes to thoroughly mix the components. No induction time is needed before application.

Pot Life & Shelf Life:

Pot life for CeRam-Kote Marine AF at 72°F (22.2°C) is 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 Marine AF 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 Ceram-Kote Technical Support prior to use.

Thinning:

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

Application:

Recommended application equipment (equivalent equipment may be substituted):

Airless Spray:	Conventional Spray:
Pressure = 2,800 – 3,000 psi	Gun = Binks 2001 or similar
Hose = 3/8" ID	Fluid Nozzle = 68 (2.8 mm orifice size)
Tip = 0.021" to 0.027"	Air Nozzle = 68PB
Filter = 30 mesh	Atomization Pressure = 40 psi
Reduction = as needed up to 10% by volume	Fluid Pressure = 30 psi
Reduction = as needed up to 15% by volume	

Brush:	Roller:
Natural bristle	Cover = ½" lambs wool
Reduction = Not recommended	Reduction = Not recommended

Damp or oil contaminated surfaces should always be brushed, rolled or spray and backroll applied, working the paint film into contamination.

All other surfaces - spray apply for best results using conventional, airless, 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. After thoroughly mixing CeRam-Kote®, strain it with a standard paint strainer and pour CeRam-Kote® into the spray equipment.

Performance Tips: Stripe coat all crevices, welds and sharp angles to prevent early failure in these areas. When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. Whenever possible, cross spray at a right angle. Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions and excessive film build. Excessive reduction of material can affect film build, appearance, and adhesion. In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with CeRam-Kote® Thinner 1 or CeRam-Kote® Thinner 3. Do not apply the material beyond recommended pot life. Do not mix previously catalyzed material with new.

Climate: Use CeRam-Kote Marine AF 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 Marine AF will not cure or perform properly.

Holiday Detection: CeRam-Kote Marine AF 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 MEK and then re-apply CeRam-Kote Marine AF. 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 MEK 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.

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