

## PRODUCT DATA SHEET: CERAM-KOTE® 54 SST

### Description:

CeRam-Kote® 54 SST is a ceramic polymer coating that has excellent resistance to water, hydrocarbons, and corrosive gases. It can also be used as a primer over marginally prepared substrates and rusty steel surfaces. It is tolerant of moist/damp surfaces and suitable for use in USDA inspected facilities.

CeRam-Kote® 54 SST is used as a maintenance coating to protect steel structures in industrial facilities, bridges, tank exteriors, marine weathering, offshore, oil tanks, piping, roofs, water towers and other exposures. CeRam-Kote® 54 SST has good chemical resistance to splash/spillage, fumes and immersion in neutral, fresh and salt water. Contact your CeRam-Kote® representative for specific information.

### Recommended Uses:

- Storage tanks
- Tank exteriors
- Piping
- Industrial facilities
- Offshore platforms
- Roofs
- Bridges
- Oil tanks
- Water towers
- Concrete floors
- Marine vessels (hulls\* / deck)

## TECHNICAL DATA

<b>Finish:</b>	Semi-gloss	
<b>Colors:</b>	Select colors available (white, tan, gray are stock). Other colors upon request.	
<b>Volume Solids:</b>	80% +/- 2% (calculated value)	
<b>Weight Solids:</b>	90% +/- 2%	
<b>VOC:</b>	<197 g/l : 1.64 lb/gal (calculated value)	
<b>Dry Film Thickness:</b>	10 – 15 mils (250 – 375 microns)	
<b>Coats:</b>	1 or 2	
<b>Theoretical Coverage:</b>	130 ft <sup>2</sup> /gal / 3 m <sup>2</sup> /l (at 10 mils / 250 microns)	
<b>Abrasion Resistance:</b>	20 mg loss (ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load)	
<b>Adhesion:</b>	3,000 psi (ASTM D4541)	
<b>Direct Impact Resistance:</b>	40 in. lbs. (ASTM D2794)	
<b>Salt Fog Resistance:</b>	2,000 hrs, no blistering, cracking, softening, or delaminating (ASTM B117)	
<b>Temperature resistance:</b>	<u>Minimal prep:</u> Continuous (dry) = 200°F / 93°C Continuous (immersion) = 100°F / 38°C	<u>Recommended prep (NACE-2):</u> Continuous (dry) = 250°F / 121°C Continuous (immersion) = 150°F / 65°C
<b>Water resistance:</b>	Excellent	
<b>Corrosion resistance:</b>	Excellent	
<b>Solvent resistance:</b>	Excellent	
<b>Chemical resistance:</b>	Very good	Contact distributor for specific information

*\*Performance dependent on level of preparation*

**Surface Preparation:**

Coating performance is proportional to the degree of surface preparation. Abrasive cleaning is the most effective and economical method; however, if this form of preparation is impossible or impractical, CeRam-Kote® 54 SST is accommodating of marginally prepared and slightly moist, damp, or oil-contaminated surfaces. The acceptability of CeRam-Kote® 54 SST over surfaces in contaminated environments should be evaluated by preparing and coating a test patch area. The test patch area should use the same surface preparation and application method intended for the total project. Allow the test patch to dry a minimum of 7 days before evaluating adhesion. If adhesion is poor, the surface will need to be cleaned of contaminant before coating. Always remove fallout, dirt, loose rust, and peeling paint. Damp or oil contaminated surfaces should always be brushed, rolled or spray and backroll applied, working the paint film into contamination.

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® 54 SST to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments.

**Mixing:**

CeRam-Kote® 54 SST contains a high loading of ceramic particles which must be placed into full suspension with the polymer resin prior to application. CeRam-Kote® 54 SST 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® 54 SST 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.

**Mix Ratio:**            **4:1 by volume - calculated**  
                                 **7:1 by weight**

**Pot Life & Shelf Life:**

Pot life for CeRam-Kote® 54 SST at 72°F (22.2°C) is two (2) hours. 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. Preferred storage/usage is a dry enclosed area under 85°F (29°C) /used within two (2) years.

**Thinning:**

Adjust viscosity with small amounts of CeRam-Kote® Thinner 1 or CeRam-Kote® Thinner 3. Use caution when adjusting the viscosity.

**Application:**

Recommended application equipment (equivalent equipment may be substituted):

Airless Spray:

Pressure = 2,800 – 3,000 psi

Hose = 3/8" ID

Tip = 0.021" to 0.027"

Filter = 30 mesh

Reduction = as needed up to 10% by volume

Conventional Spray:

Gun = Binks 2001 or similar

Fluid Nozzle = 68 (2.8 mm orifice size)

Air Nozzle = 68PB

Atomization Pressure = 40 psi

Fluid Pressure = 30 psi

Reduction = as needed up to 15% by volume

Brush:

Natural bristle

Reduction = Not recommended

Roller:

Cover = 1/2" lambs wool

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® 54 SST, strain it with a standard paint strainer and pour CeRam-Kote® 54 SST 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:**

**For Maximum Performance:** Use CeRam-Kote® 54 SST 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%.

**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® 54 SST. 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.

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