Military / Aviation Industry

PRODUCT DATA SHEET: CERAM-KOTE 54® (LMA-MR005A Form 1)

This Product Data Sheet is to be used only for Military and Aviation Industry applications.
Approved for LMA-MR005A Form 1

Description: CeRam-Kote 54® is a thin-film, spray applied and air-cured ceramic coating engineered to provide excellent abrasion and corrosion protection in critical service environments for all metals, fiberglass reinforced plastics, composites and plastic substrates. CeRam-Kote 54® is a highly modified resin system that has been heavily loaded with a unique package of ceramic particles to enhance performance in extremely aggressive environments. The product contains no lead, chrome or isocyanates and bears a VOC rating of 1.63 lbs/gal or 198 g/l, well under EPA requirements which makes it a very attractive alternative for aerospace, military and marine applications.

The technical data provided is standard for routine military/aviation applications. There are however, many authorized custom applications that have been developed for very specific service due to complex composites and other substrates. Please contact Ceram-Kote for specifics and guidance about your intended application.

TECHNICAL DATA

Volume solids: CeRam-Kote 54® 80% +/-2%

VOC: 1.63 lb/gal (196 g/liter) less water

Number of Coats: One coat, two passes (each pass 4-5 mils wet, 102-127 microns)

Dry Film Thickness: CeRam-Kote 54® should normally be applied a minimum of 6 mils DFT (152 microns) with a maximum thickness of 8 mils DFT (203 microns).

CureTime: A two pass 6-8 mils DFT (152-203 microns) application air dries to a touch dry finish within 3 hours at 72°F (22.2°C) and achieves a 70% cure in twelve (12)hours. Cure times lengthen at lower temperatures and shorten at higher temperatures. A minimum of 12 hours cure time is required before placing into service.

Surface Preparation: Bonding strength depends on proper preparation of the surface to be coated for long term performance of the product. The substrate should be free of oil, dust, grease and salt/chloride contamination. An anchor profile of 1-2 mils is recommended but depends solely on substrate to be coated. Cleanliness and proper preparation is the most important step to produce a coated surface that will perform and last.

Mixing Ratio:
Volume Ratio: Twelve (12) parts of Part A to one (1) part of Part B
Weight Ratio: Twenty and ½ (20.5) parts of Part A to one (1) part of Part B
NOTE: Use of this method is not recommended for quantities of less than a 1 gallon kit. Quarts, pints and touchup kits should be mixed and used as packaged.

Mixing: CeRam-Kote 54® contains a high loading of ceramic particles in Part A which must be placed in full suspension prior to mixing with Part B catalyst. Use a mechanical shaker to shake Part A until all ceramic particles are suspended in the resin. Depending on the mechanical shaker used, this may take up to 30 minutes of shaking to reach proper suspension.

Once proper suspension is achieved, combine Part A (base) with Part B (catalyst). **SPECIAL NOTE WHEN USING QUART, PINT, OR TOUCHUP KITS**: It is recommended that Part A be

poured into Part B when using quart, pint and touch-up kits to ensure proper mix ratios. Shake mixed components for 1 (one) to 2 (two) minutes to achieve thorough mixing. **DO NOT OVERSHAKE.** Additional shaking can cause heat to build up and decrease pot life. **No induction time is needed before application.** Do not mix coating until ready to apply to ensure proper pot life.

Pot Life: Pot life for CeRam-Kote 54® is approximately 1 hour at 72°F (22.2°C). Colder temperatures will increase pot life and warmer temperatures will decrease pot life. Keep cans and mixed product out of direct sunlight to prevent heat buildup.

Shelf Life: CeRam-Kote 54® should be stored in a dry enclosed area under 85°F (29°C) and used within 2 (two) years.

Thinning: Adjust viscosity with small amounts of MEK, Acetone or Isopropanol Alcohol (99% pure). Use caution when adjusting viscosity, a little goes a long way. Only a small portion of the coating is the resin is the only ingredient that can thinned. Do not exceed 10% by volume when thinning.

Application: **Spray apply for best results.** The air source must be dry and should be outfitted with air dryers to supply moisture free air. Spray equipment such as **Binks Mach 1 97-97AP** or **DeVilbiss JGHV-531-83E** is recommended for best atomization and finish.

After thoroughly mixing CeRam-Kote 54®, strain coating through a standard medium mesh paint strainer directly into spray equipment.

Apply a first pass of 4 (four) to 5 (five) mils (102-127 microns) wet film thickness (WFT) and allow approximately 30 to 45 minutes for solvent to flash off. Apply a second pass of 4 to 5 mils WFT. This will achieve a total dry film thickness (DFT) of 6 to 8 mils.

Climate: Use CeRam-Kote 54® only if the substrate temperature and ambient air temperature is above 40° F (4.4°C). Coating should not be applied when 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 54® will not cure or perform properly.

Repairs: If application is less than 72 hours old, and has not been exposed to contamination, repair by wiping with Acetone, MEK, or Isopropanol Alcohol (99% pure) and then re-apply CeRam-Kote 54®. If contaminated or more than 72 hours old, first sand with appropriate grit sandpaper, wipe clean and apply coating.

Cleanup: Purge and clean spray equipment within 30 (thirty) minutes of the final spray. Flush equipment with MEK, Acetone or Isopropanol Alcohol (99% pure) until solvent sprays clear. Disassemble and clean equipment according to manufacturer's instructions. Material left in spray equipment will solidify and damage equipment.

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