



PRODUCT DATA SHEET: CERAM-FLOOR TC-1

Description: CeRam-Floor TC-1 is a thin-film, spray or roller applied, and air dried ceramic epoxy coating system engineered to be resistant to inks, dyes and graffiti on floors. It is recommended as a topcoat over CeRam-Floor Primer or CeRam-Floor - *Self Leveling Ceramic Slurry*. With proper care, most inks and dyes as well as graffiti can be easily cleaned off surfaces with an environmentally friendly citrus based cleaners. CeRam-Floor TC-1 is a highly modified epoxy resin system that has been loaded with ceramic particles, enhancing its ability to perform well in a variety of aggressive environments. CeRam-Floor TC-1 is highly crosslinked to give superior chemical resistance. **CeRam-Floor TC-1 should be applied only to areas that will not be subjected to UV (ultraviolet) exposure. If CeRam-Floor TC-1 is exposed to UV, CeRam-Floor TC-1 will change color and fade rapidly, and could affect the product's cleanability.**

Suggested Uses: Topcoat for CeRam-Floor System

TECHNICAL DATA

Volume Solids:	80% +/- 2%
VOC:	1.59 lb/gal (190.5 g/l) less water
Number of Coats:	One coat (8-10 mils, 200-250 microns)
Dry Film Thickness:	CeRam-Floor TC-1 should be applied at a minimum of 6 mils (150 microns) with a preferred thickness of 8 mils (200 microns).
Cure time:	One coat of 6-8 mils DFT (150-200 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. If the coating is to be exposed to a critical service environment, coating should be fully cured before placing into service.
Surface Preparation:	<p>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. Cleanliness is the most important step to produce a coated surface that will perform and last.</p> <p>If surface is contaminated or more than 72 hours old, clean the surface and sand with appropriate grit sandpaper (recommended 100 grit or rougher).</p>
Mixing:	<p>CeRam-Floor TC-1 contains a high loading of ceramic particles which must be placed into full suspension with the epoxy resin prior to application. CeRam-Floor TC-1 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 an Edsan's Jiffler 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-Floor TC-1 from performing or curing properly. Check the can to assure all solids are in suspension prior to proceeding to the mixing step.</p> <p>Combine Part A (coating) and Part B (curing agent) and shake again until both parts are thoroughly mixed. Shaking time is temperature dependent, but a two (2) to four (4) minute shake at 72°F (22.2°C) should thoroughly mix the components. However, caution must be used to prevent heat buildup. A ten (10) to fifteen (15) minute induction time is recommended prior to application.</p>
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.
Pot Life & Shelf Life:	Pot life for CeRam-Floor TC-1 at 72°F (22.2°C) is approximately six (6) to eight (8) 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. CeRam-Floor TC-1 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.

- Thinning:** CeRam-Kote thin-film coatings are shipped from the factory with a viscosity of 60-90 seconds so thinning will be required prior to application. Adjust viscosity with small amounts of Acetone, Methyl Ethyl Ketone (MEK) or Isopropyl Alcohol (99% pure). Use caution when thinning, as a little thinner goes a long way. Do not over thin. Proper spraying viscosity at 78° F (25.6° C) is 28-34 seconds using a #4 Ford cup. In cold weather below 60° F (15.6° C) 2-10% thinner by volume is sufficient* (10% maximum).
- *dependent on ambient temperature
- 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 Binks 2001 spray equipment with a 563CVT needle, 63CVT fluid nozzle and 63PB air nozzle. 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 shaking CeRam-Floor TC-1, strain it with a standard paint strainer and pour CeRam-Floor TC-1 into the spray equipment.
- Apply one coat of eight (8) to ten (10) mils (200-125 microns) WFT for a total DFT of six (6) to eight (8) mils (150-200 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.**
- Roller Applied:** Pour out in a ribbon fashion across area and squeegee with flat squeegee to obtain a mil thickness close to desired requirement. Take a smooth roller and back roll the surface until desired mils have been achieved.
- Climate:** Use CeRam-Floor TC-1 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 Acetone or Isopropanol (99% pure) and then re-apply CeRam-Floor TC-1. If contaminated or more than 72 hours old, clean the surface and sand with appropriate grit sandpaper, then repeat repair process.
- Equipment Cleanup:** Purge and clean spray equipment within thirty (30) minutes of the final spray. Flush equipment with Acetone or Isopropanol (99% pure) 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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