



TECHNICAL DATA

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CT 3000 TROWABLE CERAMIC COAT

Product Description

A 100% solids, two component, high performance, trowable, ceramic filled epoxy for rebuilding worn or damaged equipment to their original performance specifications or better.

Features

- Excellent resistance to corrosion, cavitation, chemicals and erosion.
- Vertical or overhead repairs are easily done due to non-sag properties.
- Low chloride content reduces the possibility of corrosion attack and stress cracking on alloys.

Recommended Uses

- Rebuild worn pump casings, suction plates, butterfly and gate valves.
- Repair tube sheets, heat exchangers, water boxes, and other circulating water equipment.
- Restore worn, eroded equipment to extend operating life.
- Repair other linings damaged by abrasion or cavitation.

Chemical Resistance

| | | | |
|------------------------|----|-------------------------|----|
| Sodium Hypochlorite 5% | E | Sodium Hydroxide 50% | E |
| Trisodium Phosphate 5% | E | Aluminum Sulfate 5% | E |
| Sulfuric Acid 10% | E | Ferric Chloride | E |
| Sulfuric Acid 50% | E | Acetic Acid 10% | U |
| Hydrochloric Acid 10% | E | Water | VG |
| Nitric Acid 10% | VG | Saturated salt solution | VG |
| Nitric Acid 40% | U | Leaded Gasoline | VG |
| Phosphoric Acid 10% | E | Mineral Spirits | VG |
| Phosphoric Acid 40% | VG | ASTM #3 oil | VG |
| Sodium Hydroxide 10% | E | Propylene Glycol | VG |

E = Excellent VG = Very Good U = Unsatisfactory
7 day room temperature cure, 30 day immersion @ 75°F.

Typical Properties

| | |
|---------------------------------------|--------------------------------------|
| Solids by Volume | 100% |
| Volatile Organic Compounds | 0.0 lb/gal (0 g/l) |
| Theoretical Coverage | 1604 ft ² / gal @ 1 mil |
| Recommend DFT | ¼ - 5/8" |
| Number of Coats | 1 or more |
| Mix Ratio (by volume) | 2.9 "A" : 1"B" |
| Mixed Consistency | Putty |
| Shelf Life @ 60-90°F (16-32°C) | Part A months Part B months |
| Temperature Resistance | 350°F (dry) |
| Color | Dark blue |

Specification Data

| | |
|--|---------------|
| Compressive Strength ASTM D 695 | 12700 psi |
| Adhesive Tensile Shear ASTM D 1002 | 2000 psi |
| Cured Hardness ASTM D 2240 | 90 Shore D |
| Dielectric Strength ASTM D 149 | 370 volts/mil |

Ordering Information

| | |
|-------------------------|---------------------------------|
| Packaging: | 0.7 gallon 2.28 gallon |
| Shipping Weight: | 10 lbs (0.7) 32.5 lbs (2.28) |

APPLICATION INFORMATION

CT 3000

Surface Preparation

Remove all oil, grease or other contaminants from the surface to be coated in accordance with SSPC-SP 1.

Non-Immersion: Abrasive blast to a Commercial Blast in accordance with SSPC-SP 6 and obtain a 2-4 mil (50-100 μ) angular anchor pattern.

Immersion: Abrasive blast to a White Metal Blast in accordance with SSPC-SP 5 and obtain a 2-4 mil (50-100 μ) angular anchor pattern.

Note: For equipment that has been handling sea water or other salt solutions a test for chloride contamination should be performed prior to application.

Mixing

Material is formulated to be a stiff mixture that will not sag when applied on vertical, curved or overhead surfaces.

Place the resin (blue) and hardener (white) on a flat, disposable surface. Using a trowel or wide bladed tool mix thoroughly until the color is uniform and streak free, about 4 minutes.

It is strongly recommended that mixing be limited to full kits only. If mixing less than full kits mix by volume as follows:
2.9 parts Resin (A) to 1 part Hardener(B).

Thinning

DO NOT THIN

Pot Life

| Material Temperature | Time |
|----------------------|------------|
| 75°F (24°C) | 45 minutes |

Application Conditions

| | Normal | Minimum | Maximum |
|-----------------|----------------------|----------------|----------------|
| Material | 75-90°F (24-32°C) | 55°F (13°C) | 90°F (32°C) |
| Surface | 75-90°F (24-32°C) | 55°F (13°C) | 90°F (32°C) |
| Ambient | 75-90°F (24-32°C) | 55°F (10°C) | 90°F (32°C) |
| Humidity | 30-50% | 0% | 85% |

- Surface temperature must be 5°F (3°C) above the dew point.

Application

For maximum adhesion surfaces should be primed with CC 4000 to wet out the prepared substrate.

After the initial coat the CT 3000 can be applied by trowel or wide blade putty knife, in multiple coats to achieve a 5/8" thickness in order to rebuild the original equipment or to achieve target thickness.

Use MEK or similar solvent for clean up.

Cure Time

These times are based on a 30-50% RH. Excessive film thickness, cooler temperatures or inadequate ventilation will require longer cure times and could result in premature failure.

Surface Temperature

| | 75°F |
|--------------------------|------------|
| Working Time | 45 minutes |
| Tack Free | 3 hours |
| Recoat (min) | 3 hours |
| Recoat (max) | 18 hours |
| Functional Cure | 18 hours |
| Full cure | 33 hours |
| Chemical Exposure | 6 days |

- If the material has exceeded its maximum recoat time or full cure time contact ITW Futura Coatings for recommended recoating procedures.
- Curing can be accelerated by using heat after the coating has been allowed to harden under ambient conditions. At 150°F material will cure in 4 hours.
- Holiday testing per NACE RP0199-98 should be conducted for all coatings going into immersion service. Use a setting of 100 volts/mil.

Safety Information

- Read the Material Safety Data Sheet (MSDS) and container labels for detailed health and safety information.
- Do not apply material in enclosed areas without adequate air exchange and ventilation.
- All application personnel must use respirators rated for organic vapors, or in confined spaces wear fresh air respirators or fresh air hoods.
- Wear protective clothing, gloves and eye protection.
- Breathing fumes or contact with the skin may cause severe allergic reactions.
- **This product is intended for industrial use by properly trained professional applicators only.**

Storage Conditions

- Coatings need to be protected from moisture contamination. Store drums and pails in a dry location at 50-90°F (10-32°C).
- Materials **must** be kept above 50°F (10°C).

ITW FUTURA COATINGS, 1685 GALT INDUSTRIAL BLVD., ST LOUIS, MO, (314) 733-1110

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