

## General Description

**Curran 1000 T** is an advanced two part 100% solids epoxy coating designed specifically for high temperature immersion service in cooling water and process streams. This coating is an organic/inorganic hybrid that exhibits state of the art coating technology with exponential improvements in performance versus existing polymer technology. Can withstand multiple cycling and steam out events subjected to process equipment. Ideally suited for small diameter tubes:

- Heat exchanger tubes
- Fin Fan/Air cooler tubes
- Condenser tubes (*For power plant condensers please see Curran 1000 CT coating*)
- Chiller tubes

## Benefits:

- Outstanding immersion protection in water and hydrocarbons.
- Can withstand multiples of heat cycling events with no effect.
- Tolerates excursions/steam outs to + 400 (°F) 204 (°C).
- Excellent foul release.
- Reduction in drag
- Coating surface remains slippery even at high temperatures.
- High Gloss finish

- More thermally stable at higher temperatures than other coatings.
- Zero VOC'S (100% Solids) as supplied

## Coating Properties:

Color: Black/Grey/Green/White

Weight (lbs/ gal) 12.8

Volume solids: 100%

Flash Point > 200 F (93 C)

## Performance Data:

The following tests were performed on samples after full cure (96 hours @ 70F).

## Abrasion Resistance: ASTM D 6040

Tabor CS-17 wheel 1000 cycles

107 mg loss

## Cathodic Disbondment: ASTM G 8

0.0mm disbondment at 100C for 30 days.

## Chemical resistant:

Contact Curran International for specific chemicals/temperatures/concentrations.

**Recommended** for steam, hydrocarbons, acids and caustics

## Hardness Barcol: (ASTM D 2583) 50



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**Shore D Hardness:** (ASTM D 2240) 85

- Surface roughness: 1.0 Mil minimum surface profile.

**Pull off Adhesion:** ASTM D 4541

>3,500 PSI to substrate, superficial cohesive failure at 3,300 PSI

#### Coating Application:

- Coating must be fully mixed before addition of solvent (*if needed*)
- Minimum 60:1 airless spray pump

#### Temperature Resistance:

Tested up to 365 (°F) 185 (°C) in steam.

Contact Curran on particular service conditions.

#### Film Thickness/Coat:

Spray application = 4-6 mils DFT

#### Theoretical Coverage: (*as supplied*)

Based on 1 mil (25.4 microns)

1 Gallon will cover 1604 ft<sup>2</sup> (150 m<sup>2</sup>)

#### Environmental:

Apply when substrate temperature is between 60 F and 100 F. Substrate must be 5 F above dew point

#### Mix Ratios:

- Mixing Ratio by Weight:  
100 grams to 32.31 grams (B/A)
- Mixing Ratio by Volume:  
3.1257 : 1 (B/A)

#### Thinning: (*if required*)

- Thinning: Denatured alcohol or Acetone can be utilized for thinning and clean up. No more that 25 % of either solvent can be added to the coating. Coating must be fully mixed before addition of solvent

#### Application:

Below are general guidelines for applying Curran 1000 T. Contact Curran International for detailed application procedures.

#### Holiday Inspection:

Wet sponge testing is recommended with 67.5 VDC

#### Surface preparation:

- New surfaces should be degreased prior to grit blasting
- SSPC- SP 10, NACE 2.0; SA 2.5 is a minimum surface cleanliness

#### Repairs:

Should coating be mechanically damaged or a holiday is detected take the following steps to perform a repair.

- 1) Abrade area if overcoat window has expired
- 2) Apply another coat or coats of material to repair area to required DFT



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- 3) Once coating has become tack free, QC repaired areas
- 4) Contact Curran International for detailed application procedures.

**Working Times:**

At 70F (21C) the usable life of mixed material is 60 min. Working times will vary depending on temperature and amount of material mixed.

**Storage/Shelf Life:**

Store in temperatures between 50F (10C) and 90F (32C)

Separate base and hardener will have a shelf life for 2 years when in original, unopened container that is not damaged and stored at the above temperature ranges.

**Health and Safety:**

Prior to using this product please review the appropriate Material Safety Data Sheet (MSDS).

**Cure Time:**

|                                     | 50F/10C | 60F/16C | 70F/21C | 90F/32C |
|-------------------------------------|---------|---------|---------|---------|
| Tack Free (Minimum)                 | 12 hrs  | 10 hrs  | 8 hrs   | 4 hrs   |
| Light load (Minimum)                | 24 hrs  | 20 hrs  | 16 hrs  | 8 hrs   |
| Overcoat (Maximum)                  | 24 hrs  | 18 hrs  | 12 hrs  | 4 hr.   |
| Overcoat w/ solvent added (Maximum) | 96 hrs  | 72 hrs  | 60 hrs  | 48 hr.  |
| Full Load (Minimum)                 | 60 hrs  | 40 hrs  | 32 hrs  | 16 hrs  |
| Full Chem (Minimum)                 | 154 hrs | 120 hrs | 64 hrs  | 32 hrs  |

**Note:** Full cure should be confirmed by a Barcol Hardness test or a MEK rub before exposing coating to chemical service.

The information in this data sheet is based on laboratory tests we believe to be accurate, and is intended for guidance only. All recommendations or suggestions relating to the use of this product, whether in technical documentation, or in response to a specific enquiry, or otherwise, are based on data which to the best of our knowledge are reliable. Because the only true reliable test is one that is in actual operation, Curran International will make available at no charge, samples of the material for testing purposes.

Curran International has no control over either the quality or the condition of the substrate, or the many factors effecting the use and application of the material. Curran International does therefore not accept any liability arising from loss, injury or damage resulting from such use or the contents of this data sheet (unless there are written agreements stating otherwise). The data contained herein are liable to modification as a result of practical experience and continuous development.



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This data sheet replaces and annuls all previous issues and it is therefore the user's responsibility to ensure that this data sheet is current prior to using the product.