Trico Bond EP®

Epoxy Powder Coating

What's in Your Coatings?

All quality coating systems are based on superior resins and pigments. CST™ invested seven years of research and development and field trials to develop the modified epoxy powder system, Trico Bond EP®, applied to all liquid and dry bulk bolted tanks since 2003. Only lead-free, chrome-free pigments are utilized.

Likewise, CST takes the extra step to apply a performance urethane to all tank exteriors. UV-inhibiting clear urethane greatly extends gloss and color retention properties. It delivers superior UV performance versus powder on powder coatings.

Design Standards

CST's Trico Bond EP epoxy powder coating complies with national and international standards:

- AWWA D103
- FDA
- NSF 61

Physical Properties

Application	Test	Trico Bond EP®
Dry Film Thickness (DFT)	Average (DFT)	Interior: 4.0 mil (100 µm) – 9.0 mil (225 µm) Exterior: 3.5 mil (85 µm) – 5 mil (130 µm)
Limiting Temperature	Dry Heat Immersed	200° F (93° C) (Application Dependent) 140° F (60° C) (Product Dependent)
Corrosion Resistance	Salt Spray - ASTM B117 Cyclic Corrosion - ASTM D5894	6000 Hours 7 Cycles
Impact Resistance	ASTM D2794	Pass - 160 in-lbs direct/reverse impact
pH Range		4-11 (product dependent)
Abrasion Resistance	Falling Sand - ASTM D968 Adhesion - ASTM D3359	Pass 212 liters/mil 5B Pass 100%
Surface Gouging Resistance	ASTM D3359	5B Pass 100%
Hardness	ASTM D3363	3H
Chemical Immersion	NaOH; H_2SO_4	10% NaOH; 10% H_2SO_4 – 6 months at 70° F (21° C)
Color	Sahara Gold (Standard)	Other colors available

Trico Bond EP® Chemical Performance

Liquid		Dry	
10% Aluminum Sulfate	Deionized Water	ABS Pellets	Hydrated Lime
32% Ammonium Nitrate	Demineralized Water	Ammonium Nitrate	Kaolin Clay
30% Ammonium Sulfate	Distilled Water	Bauxite	Perlite
20% Ferric Chloride	Potable Water	Bentonite	Polyethylene Pellets
30% Sodium Chloride	Fresh Water	Blood (Dried)	Polyvinyl Chloride
10% Sodium Hydroxide	Municipal Wastewater	Bone meal	Sodium Bicarbonate
15% Urea	Salt Water	Boric Acid	Soybean Meal
Ammonium Hydroxide	Calcium Chloride	Calcium Carbonate	Starch
#1, 2, 4, 5 & 6 Fuel Oils	Fatty Acids	Calcium Chloride	Terephthalic Acid
Sweet & Sour Crude Oil	Manure	Carbon Black	Urea
Frac/Produced Water	Sewage	Flour	Wood Chips

List of other suitable product applications available. The table above applies to Trico Bond EP coatings.
Tank product lines might have other limitations, based upon their configurations.

World Recognized Leaders
127 Years' Experience

Flow and Abrasion Resistance

Test Results:

Trico Bond EP® and Trico Bond SD™ last 1.5 to 2.5 times longer than the #2 and #3 competitors coatings.

- #1 CST - 212 liters/mil sand
- #2 Competitor - 84 liters/mil
- #3 Competitor - ~125 liters/mil*

(from published materials available)

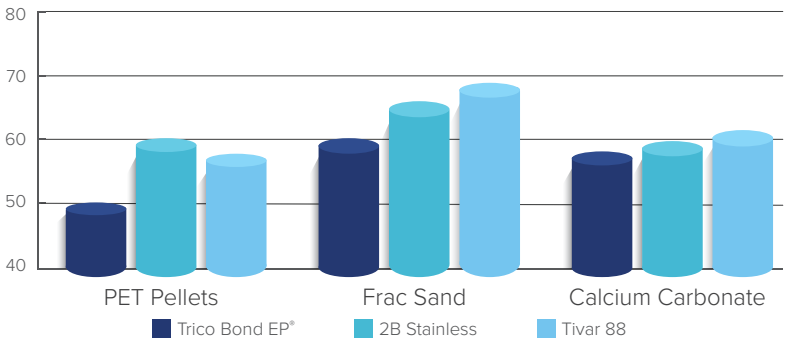
Abrasion resistance is determined by testing the resistance of organic coatings to the abrasion generated by falling sand onto coatings applied to either metal or glass panels or the concentrated area.

This test measures the hopper angle required to achieve the mass flow of various products. Trico Bond EP® results demonstrate the enhanced slickness and flow promotion of the CST coating system.

CST Trico Bond EP and SD vs. Competitors
(2015/2016 Third-Party Testing)

Test	Trico Bond EP®	Trico Bond SD™	Competitors
140° F (60° C) Water	Yes	Yes	Yes
200° F (93° C) Water	No	Yes	No (<30 days)
Mil Thickness	5 to 10	4 to 10	5 to 11
Adhesion ASTM D3359 A	Pass	Pass	Pass
Falling Sand ASTM D968	212 liters/mil	212 liters/mil	84 liters/mil
Pencil Hardness	3H	3H	2H

Hopper Slope Required for Mass Flow
(Product Tested at 72° F (22° C))



OptiBond™ Process

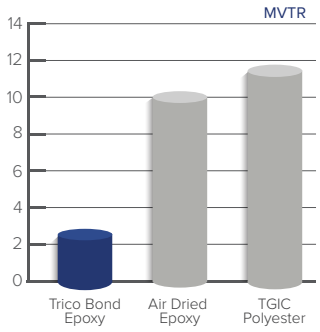
Coating performance is highly dependent on proper surface preparation. Good coating systems fail prematurely due to inadequate surface preparation, high dew points and low temperature during application.

CST applies all coatings in an ISO 9001:2015 certified facility, under controlled environmental conditions using its proprietary OptiBond™ coating process to deliver the finest epoxy coating available in the storage tank industry.

Quality Assurance	
Final Coating Thickness	— Electronic DFT Gage
Coating Voids (Holidays)	— 1,100V Dry High Voltage ASTM D5162 Method B
Distilled Water	— Colorimeter Test

Surface Preparation		
SP10	Near-White Metal Blast	95% White Metal

Lower Moisture Vapor Transmission Rate



» Surface Preparation

» Coating Application

» Heat Curing

» Holiday Testing

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