

TRICO BOND EP[®]

Epoxy Powder Coating



WHAT'S IN YOUR COATING?

All quality coating systems are based on superior resins and pigments. CST invested seven years of R&D 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.

PHYSICAL PROPERTIES*		
Application	Test	TRICO BOND EP [®]
Dry Film Thickness	Average DFT	3.0 - 9.0 mils interior 3.5 - 5.0 mils exterior
Limiting Temperature	Dry Heat Immersed	200 F (application dependent) 140 F (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 ₂ SO ₄	10% NaOH; 10% H ₂ SO ₄ - 6 mos @70F
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	Bonemeal	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.



DESIGN STANDARDS

National and International Standards TRICO BOND EP coating complies with:

- AWWA D103
- FDA
- NSF 61

TRICO BOND EP® FLOW & ABRASION RESISTANCE

CST TRICO BOND EP® and SD™ vs. Competitor's (2015 / 2016 3rd party Testing)

Test	TRICO BOND EP	TRICO BOND SD	Competitor's
140° F Water	Yes	Yes	Yes
200° F 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 L/mil	212 L/mil	84 L/mil
Pencil Hardness	3H	3H	2H

Test Results:

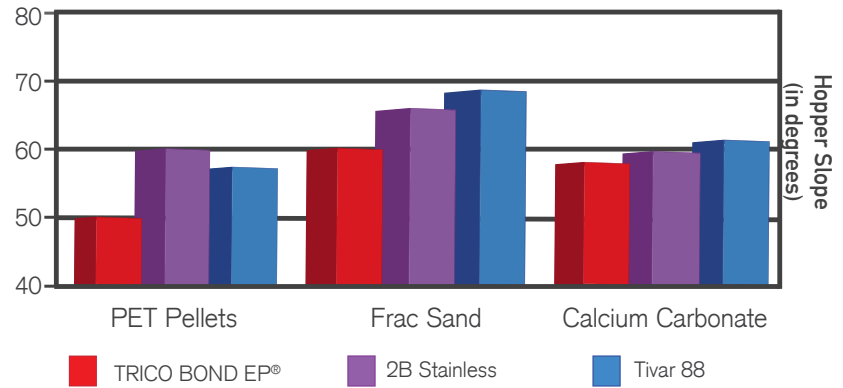
Versus the #2 & #3 competitor's coatings, TRICO BOND EP lasts 1.5 to 2.5 times longer:

- #1 CST - 212 L/mil sand
- #2 competitor - 84 L/mil
- #3 competitor - ~125 L/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 mass flow of various products. TRICO BOND EP results demonstrate the enhanced slickness and flow promotion of the CST coating system.

Hopper Slope Required for Mass Flow
(product tested at 72°F)



OptiBond™ PROCESS

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

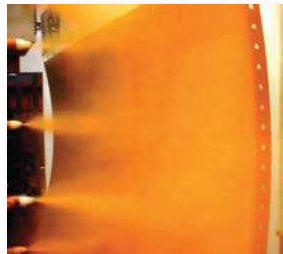
SP10	Near-White Metal Blast	95% White Metal
------	------------------------	-----------------

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 certified facility, under controlled environmental conditions using its proprietary OptiBond™ coating process to deliver the finest epoxy coating available in the storage tank industry.



Surface Preparation



Coating Application



Heat Curing



Holiday Testing

Call +1 913.621.3700 or visit us online at cstindustries.com to find an authorized dealer near you.

903 E 104th Street | Kansas City, MO 64131 USA
Ph: 913.621.3700 | www.cstindustries.com

© 2016. CST Industries, Inc. TRICO BOND EP is a registered trademark and OptiBond and TRICO BOND SD are trademarks of CST Industries, Inc.



TB-EP-1606