EONCOAT®

Technical Data Sheet v.5.- Last Updated Mar-2021

Product Code:

EonCoat – Corrosion Protection Part A
EonCoat – Corrosion Protection Part B

General Description: Two component, inorganic, coating. Forms a continuous coat of ceramic coating that provides excellent anti-corrosion properties for carbon steel.

Product Features:

- Superior anti-corrosive primer for protection of steel
- Fast drying and rapid return to service
- Inorganic water based, no VOC, no HAPs, no odor and zero flame spread

Technical Data:

Color: White

Sheen: Flat

Mixing Ratio: 1:1 must require plural pump to spray.

Clean up: Water

Volume Solid: 95±5%

Thinner: Do Not Thin

Theoretical Coverage: ~80 ft^2/gallon @ 20 mils

Shelf life: 1 year.

Pot life: N/A - None

Flash Point: N/A

Storage: Do not store EonCoat in direct sunlight for a prolonged period of time. Minimum storage temperature is 45^{0}F (8^{0}C) and maximum 110^{0}F (44^{0}C). When opened, containers can be used more than once when lids are tightly sealed after each use. Opened containers should be used within (1) month after opening.

Drying Schedule @ 20 mils Wet

	@ 50^{0}F	@75-80^{0}F	@100^{0}F
To touch:	~15 min	~8 min	~5 min
To handle:	1 hour	~45 min	~30 min
To recoat:			
Minimum:	10-15 min	8-10 min	5-8 min
Maximum	No recoat window. Coating needs to be wet before recoating.		

Drying time is temperature, humidity, and thickness dependent.

Recommended Uses

For use over properly prepared steel in the following industrial environments:

* Petro-Chemical
* Bridges and Highways
* Fabrication Shops
* Pulp and Paper Mills
* Marine – Structures and Offshore
* Immersion services

Surface Preparation

Surface must be clean, damp to dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion and reaction with steel.

→Refer to product application brochure (pictures and surface requirements) for detailed surface preparation information.

Minimum recommended surface preparation:

For Iron and Steel:

Atmospheric:	SSPC – SP 6/ NACE 3 / SSPC-SP WJ-1 L/NACE WJ-1/L (with existing profile). Minimum profile required: 2 mils. Flash rust with damp surface is accepted. Mill scale is not accepted.
Immersion:	SSPC – SP 6/ NACE 3 / SSPC-SP WJ-1 L/NACE WJ-1/L (with existing profile). Minimum profile required: 2 mils. Flash rust with damp surface is accepted. Mill scale is not accepted.

For Concrete & Masonry

Atmospheric:	SSPC-SP13/ NACE 6
Immersion:	SSPC-SP13/ NACE 6

Application Conditions

Temperature:
Surface: 50^{0}F minimum 120^{0}F maximum
Material: 60^{0}F minimum 95^{0}F maximum
* Misting with water may be required depending on surface temperature and wind conditions. Refer to product application brochure for more information. Also refer to triangle graph enclosed here.

Dew Point: No restriction

Relative Humidity: 20-98%

Refer to the triangle graph on page 3 for more detail about application conditions.

Ordering information

Packaging:	9 gallons
Part A:	4.5 gallons in 5 gallons container
Part B:	4.5 gallons in 5 gallons container
Weight:	14.2 lbs./gallon → 65 lbs. bucket weight

Safety Precautions

Refer to the SDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your EonCoat representative for additional technical data and instructions.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	SSPC	NACE
White metal		Sa 3	SP 5	1
Near White metal		Sa 2.5	SP 10	2
Commercial Blast		Sa 2	SP 6	3
Brush-Off Blast		Sa 1	SP 7	4
Hand Tool Cleaning	Rusted/Pitted	C St 2/ D St 2	SP 2 / SP 2	-
Power Tool Cleaning	Rusted/Pitted	C St 3/ D St 3	SP 3/ SP 3	-

Application Equipment

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with water. No reduction is necessary. DO NOT REDUCE. Clean up with water.

Clean up:	Water
Airless Spray:	
Pump	30:1
Pressure	700 - 3200 psi
Hose	½ - ¼" diameter
Tip	225 - 543
Filter	30 mesh
Reduction	Do Not Reduce. Not Recommended.

Refer to product application brochure for complete detail on pump set up and instructions.

Application Procedures

Surface preparation must be completed as indicated

Mixing Instructions.

Part A: Part A (Acidic component of acid-base reaction) comes in a gel form. Four blade paddle mixture needs to be used to break gel apart. Once gel has been broken material gains some fluidity, bucket needs to be mixed with bucket (dispersion blade) mixture. Make sure no material remains on the bottom of the bucket. ~3-5 min mixing is needed to ensure proper mixing and no agglomerations.
Part B: Part B (Basic component of acid-base reaction) needs to be mixed with four blade paddle mixture or conventional mixing blade. Make sure no material remains on the bottom of the bucket. ~1-3 min mixing is needed to ensure proper mixing of product with no agglomerations.

Recommended Spraying Rate

	Minimum	Maximum	
Wet Mils	25	35-40	Coverage: 80 ft^2/gallon
Dry mils	20	30-35	

Refer to product application brochure for complete application procedures and instructions to overcome issues.

To prevent sagging follow drying schedule.

Misting with water may be required depending on surface temperature and wind conditions. EonCoat chemically reacts with flash rust and it can be applied over rust. For further detail refer to product application brochure.

Clean Up Instructions

Clean up spray gun and pump with water following instructions written in application brochure. DO NOT USE SOLVENTS.

Disclaimer

The information and recommendations set forth in this technical data sheet are based upon tests conducted by or on behalf of the EonCoat, LLC. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your EonCoat representative to obtain the most recent technical data sheet information and application brochure.

Performance Characteristics

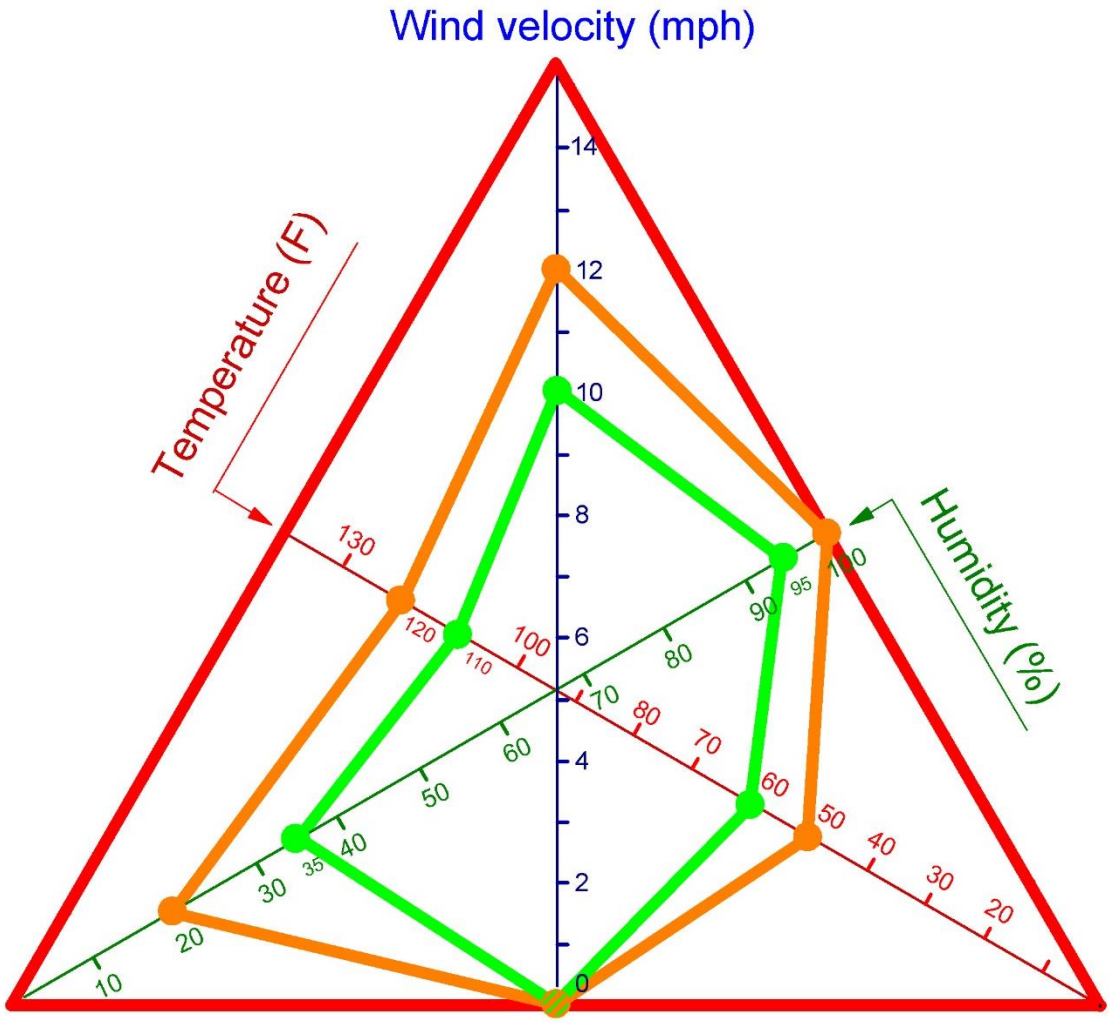
Substrate:	Steel (Unless otherwise noted with test results)
Surface Preparation:	SSPC – SP 6/ NACE 3 / SSPC-SP WJ-1 L/NACE WJ-1/L
System Tested:	EonCoat (as a primer) 17-25 mils. with acrylics/ polysiloxane/ urethane topcoats 4-8 mils.

Test Name	Test Method	Results
Abrasion Resistance (Primer only)	ASTM D 4060, CS 17 wheel, 1000 cycles, 1 Kg load	1000 Wear Cycle per Mil (WCM); 180 mg mass loss
Adhesion*	ASTM D 4541	550 psi
Corrosion Resistance*	ASTM D 5894, 12 cycles, 4000 hours	Rating 10 per ASTM D 610 for Rusting Rating 10 per ASTM D 714 for Blistering
Direct Impact Resistance (Primer Only)	ASTM D 2794	80 in. lbs.
Flexibility (Primer Only)*	ASTM D 522	18% Elongation
Immersion Resistance, Salt Water	77^0F, 2000 hours	Rating 10 per ASTM D 610 for Rusting Rating 10 per ASTM D 714 for Blistering
Immersion Resistance, Fresh Water	77^0F, 2000 hours	Rating 10 per ASTM D 610 for Rusting Rating 10 per ASTM D 714 for Blistering
Moisture Condensation Resistance	ASTM D 4585, 100^0F, 2000 hours	Rating 10 per ASTM D 610 for Rusting Rating 10 per ASTM D 714 for Blistering
Pencil Hardness (Primer Only)	ASTM D 3363	8H
Salt Fog Resistance*	ASTM B 117, 4000 hours	Rating 10 per ASTM D 610 for Rusting Rating 10 per ASTM D 714 for Blistering
Flame Spread and Smoke Generation (Primer Only)*	UL 723	Zero Flame Spread and Zero Smoke Generation
Thermal Conductivity (Primer Only)		0.25 W/Mk @ 25^0C
Water Vapor Transmission (Primer Only)	ASTM E 96	2.5 perm-inch
Resistance to Growth of Mold*	ASTM D3273	Rating – 10 = Passed
Fire Resistance*	EN 13823	B-s1, d0 Classified as B or Better

*Tested by third party lab. Reports available on request.

Warranty

The EonCoat limited product warranty can be found on the company website at www.eoncoat.com



Using the chart above:

Apply EonCoat if conditions (wind velocity, substrate temperature and humidity) fall inside the green line of the parameters. Misting may be required if hairline cracking occurs. Test small area in extreme conditions to determine path forward.

Contact EonCoat for advice on how to proceed if conditions fall between the green line and orange line.

Do not apply EonCoat if conditions fall outside of the orange line (between orange and red line, or above the red line). Speak with an EonCoat representative if conditions fall outside of the orange line.