

Product Code:

EonCoat –EonCoat Corrosion Protection (ECP) Coating Part A
EonCoat –EonCoat Corrosion Protection (ECP) Coating Part B

General Description: Two components, inorganic coating. It forms a continuous ceramic coating providing excellent carbon steel anti-corrosion properties.

Product Features:

- Fast drying and rapid return to service
- Inorganic water-based, no VOC, no HAPs, no odor, and zero flame spread
- The version that started it all. It provides robust corrosion protection on assets operating at or below 200F (95C).

Technical Data:

<u>Color:</u> White	<u>Sheen:</u> Flat	<u>Mixing Ratio:</u> 1:1	<u>Clean up:</u> Water
<u>Volume Solid:</u> 95±5%	<u>Thinner:</u> Do Not Thin	<u>Theoretical Coverage:</u> ~64 ft ² /gallon @ 25 mils (~1.6 m ² /liter @ 625 micron)	
<u>Shelf Life:</u> 1 year	<u>Pot Life:</u> N/A	<u>Flash Point:</u> N/A	
<u>Storage:</u> Do not store EonCoat in direct sunlight for a prolonged period. The minimum storage temperature is 72°F (22°C) and 114°F (46°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 @ 25 mils (625 µm(micron) Wet

	@ 50°F(10°C)	@73-80°F (23-27°C)	@100°F(38°C)
To Touch:	~10 min	~6 min	~4 min
To Handle:	1 hour	~45 min	~30 min
To Recoat:			
Minimum:	10-15 min	8-10 min	5-8 min
Maximum	There is no recoat window. The coating may need to be cleaned with water before recoating.		
Drying time is temperature, humidity, and thickness dependent.			

Recommended Uses

For use over properly prepared steel in the following industrial environments: Recommended service temperature -250F to 200F (-155C to 95C)

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

Surface Preparation

The 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 the 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: 4 mils (100 microns). Flash rust with a damp surface is accepted. The 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: 4 mils (100 microns). Flash rust with a damp surface is accepted. The mill scale is not accepted.

For Concrete & Masonry

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

Application Conditions

Temperature: Surface: 50°F(10°C) minimum 120°F(49°C) maximum
Material: 60°F(15°C) minimum 95°F(35°C) maximum

* Misting with water may be required depending on surface temperature and wind conditions. Refer to the product application brochure for more information. Also, refer to the triangle graph enclosed here.

Dew Point: No restriction

Relative Humidity: 20-98%

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

Ordering information

Packaging:	9 gallons (34 liters)
Part A:	4.5 gallons (17 liters)
Part B:	4.5 gallons (17 liters)
Weight:	14.8 lbs./gallon (1.78 kg/liter) → 68 lbs.(31kg) bucket weight

Safety Precautions

Refer to the SDS sheet before use.

Published technical data and instructions are subject to change without notice. For additional technical data and instructions, contact your EonCoat representative.

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 700-200 psi (4.8-22 MPa)

Hose ½ - ¼" diameter

Tip 225-543

Filter No filters are recommended. If one must use – use larger than 25 mesh (600 micron)

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

Part B ECP: Part B (the Basic component of acid-base reaction) needs to be mixed with a four-blade paddle mixer or conventional mixing blade. Make sure no material remains on the bottom of the bucket. ~1-3 min of mixing is needed to ensure proper product mixing with no agglomerations.

Recommended Spraying Rate

	Minimum	Maximum	
Wet Film Thickness	25 mils (635 microns)	35-45 mils (890-1145 microns)	Coverage: ~64 ft ² /gallon @ 25 mils (~1.6 m ² /liter @ 625 micron)
Dry Film Thickness	20 mils (500 microns)	30-36 mils (750-900 microns)	

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

To prevent sagging, follow the drying schedule.

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

Clean Up Instructions

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

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	1500 Wear Cycle per Mil (WCM); 95 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	150 in. lbs.
Flexibility (Primer Only)	ASTM D 522	18% Elongation
Immersion Resistance, Salt Water	77°F, 2000 hours	Rating 10 per ASTM D 610 for Rusting Rating 10 per ASTM D 714 for Blistering
Immersion Resistance, Fresh Water	77°F, 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°F, 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	9H
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°C
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

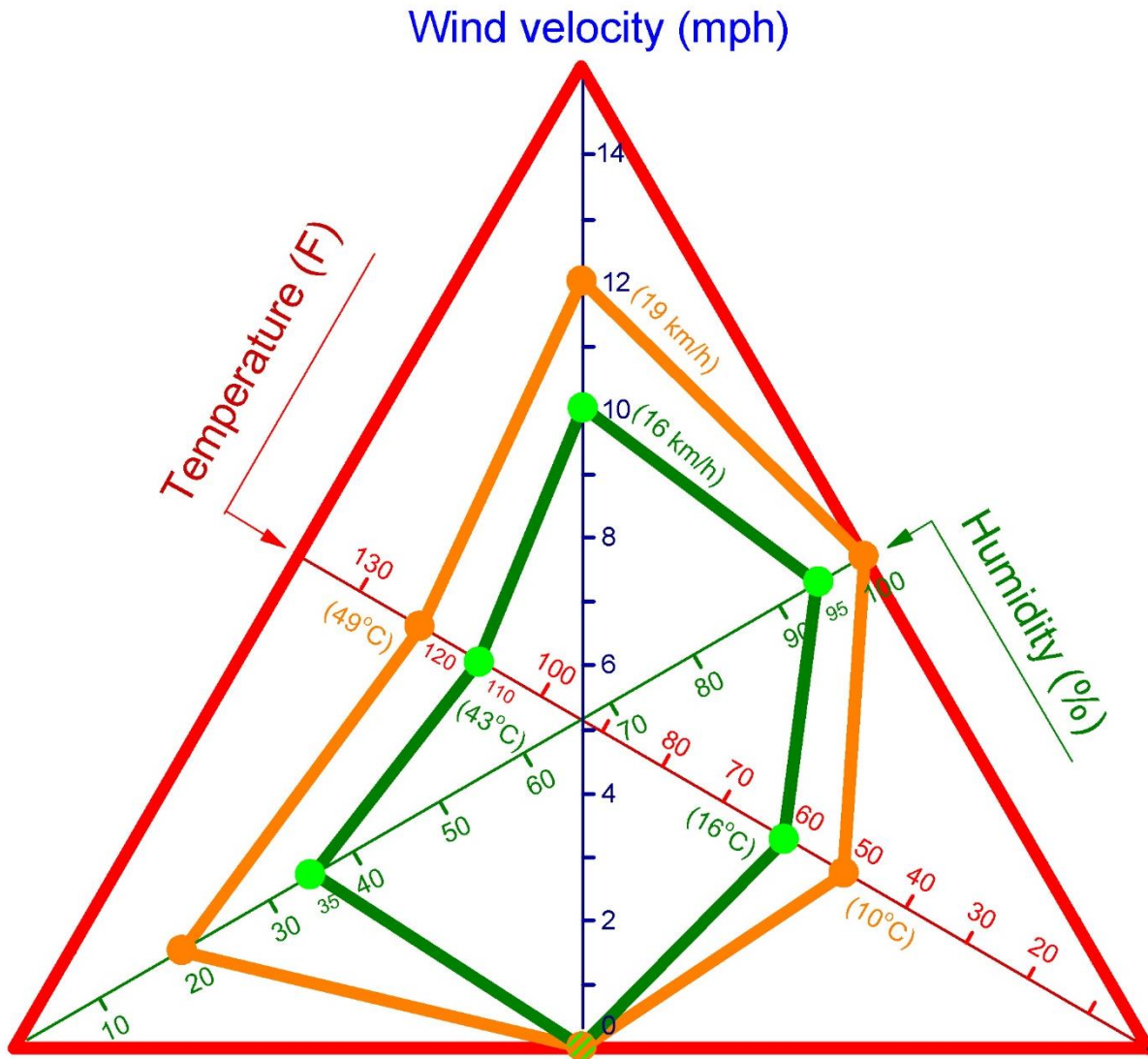
*Tested by a third-party lab. Reports are available on request.

Warranty

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

Disclaimer

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



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 a small area in extreme conditions to determine the path forward.

If conditions fall between the green and orange lines, contact EonCoat for advice on how to proceed. Do not apply EonCoat if conditions fall outside the orange line (between the orange and red line or above the red line). Speak with an EonCoat representative if conditions fall outside of the orange line.