

Product Description:

Ecosea combined moisture-cure urethane technology, micaceous iron oxide, and refined coal tar (non carcinogenic) resin to produce a superior corrosion resistant coating. Metprotect 3 has proven performance in severe exposure, and is recommended for application on various substrates for immersion, atmospheric, and buried environments. It has the ability to provide outstanding barrier protection in one-coat or multicoat systems.

Area of Use:

Substrates (correctly prepared)

Ferrous Metal	Concrete
Aluminium/ Non Ferrous Metal	Concrete Block
Galvanized Metal	Metallised
Previously Existing Coatings	

Possible Uses

Bridges	Structural Steel
Tank Interiors and Exteriors	Work Boats
Material Handling Equipment	Refineries
Pulp and Paper Mills	Pilings
Marine/Port Facilities	Barges
Chemical Processing Facilities	Offshore Platforms
Hydropower Facilities	Pipes
Water and Wastewater-Treatment Facilities	Food Processing-Facilities

Ready Reference Information:

Resin Type:	Urethane
Pigment Type:	Refined coal tar non Carcinogenic and micaceous Iron Oxide
Sheen:	Flat
Colours:	Black and Red Oxide
Volume Solids:	62.0%± 2.0
VOC:	340 g/l
(Volatile Organic Content)	

Theoretical Coverage: (@ 25µm DFT: 24.4 m²/l)

Recommended Film Thickness:

Wet: 206-287 microns- not thinned

Dry: 127-179 microns

Recommended coverage per coat:

3.48m²/l at 179 microns DFT- 4.87m²/l at 127 microns DFT

Thinning: Metprotect Thinner

Clean up: Metprotect Thinner

Drying Times and Temperatures:

*At 50% Humidity	10°C/ 50°F		24°C/ 75°F		35°C/ 95°F	
	Without accelerator	With accelerator	Without accelerator	With accelerator	Without accelerator	With accelerator
Tack Free	1 hr	--	30 min	--	20 min	--
Recoat Minimum ¹	8 hrs	1 hr	4 hrs	30 min	3 hrs	20 min
Full Cure	10 days	7 days	7 days	5 days	5 days	4 days

¹*Humidity, temperature and coating thickness will affect drying and curing times

Refer to Ecosea's Accelerator product data for additional information

Product Features:

- Single component moisture cure urethane.
- No mixing errors. No pot life limitations.
- Performance comparable to coal tar epoxy.
- Easy to apply by brush, roller or spray methods.
- Maintains build on edges, threads and weld seams.
- Immersion and non immersion.
- Can be applied at 99% humidity.
- Can be applied in below freezing temperatures. (no ice or frost)
- Remains flexible over time.
- No dew point restrictions. (Substrate must be visibly dry)
- No outer recoat window on clean surfaces.
- Compatible with accelerator for faster dry and cure times.
- Low VOC

Surface Preparation

Application Information

Ferrous Metal

Use SSPC-SP1 solvent cleaning to remove contaminants prior to employing surface preparation methods. Prepare surfaces for non-immersion or atmospheric service projects to ISO 8501-1 SA 2, (SSPC-SP6/NACE No. 3) Commercial Blast Clean finish or by SSPC-TR2/Nace 6G198 Wet abrasive blast cleaning methods to WAB 6 (M) Wet commercial blast clean finish. For minimum surface preparation, use conscientious hand and power tool cleaning methods in accordance with ISO 8504-3 (SSPC-SP 2 and 3) to remove corrosion and loose or failing paint to ISO 8501-1 St 3 (SSPC-VIS 3 SP 3). Feather-edges of sound, existing paint back to a firm edge. For immersion or severe service, apply over an Ecosea recommended primer. Refer to Primer Product Data for surface preparation information. Not recommended direct to metal in immersion. Blast cleaning methods should produce a surface profile of 1.0 - 2.0 mils (25-51 microns).

Aluminium/ Galvanised/ Non Ferrous Metals

Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanized surface preparation with ISO 8501-1 St 3 (SSPC-SP 3) Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Spot prime clean bare metal with Ecosea recommended primer. Supplement new galvanized surface cleaning with mechanical abrasion to impart surface profile and support mechanical adhesion.

Concrete/ Concrete Block

The surface must be dry, free of surface contaminants, and in sound condition. Grease, and oil should be removed by ASTM D4258- 83 (Reapproved 1999) and release agents should be removed by ASTM D4259 - 88 (Reapproved 1999). Refer to SSPC-SP13/NACE No 6 mechanical or chemical surface preparation methods for preparing concrete to suitable cleanliness for intended service. Surface preparation methods should impart sufficient surface profile for mechanical adhesion to occur. Ensure surface is thoroughly rinsed and dry prior to coating application. Allow a minimum 7 - 14 days cure time for new concrete prior to preparation and application.

Previously existing Coatings

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement SSPC-SP 12 LPWC with SSPC-SP1 Solvent Cleaning and ISO 8501 St 2 (SSPC-SP2 and 3) Hand and Power Tool clean areas of corrosion and loose or flaking paint (feather edges of sound, existing paint back to a firm edge). OR prepare surfaces using SSPC-SP 12/Nace 5.0 High or Ultra High Pressure waterjetting to WJ 4. Spot prime clean, bare metal with Ecosea recommended primer. Sand glossy surfaces to provide profile. Apply a test sample to a small area to determine coating compatibility.

Good Practices

Metprotect 3 is designed for application to a variety of substrates and tightly adhering, previously existing coatings. Apply a test sample to a small area to determine coating adhesion and/or compatibility. Spot prime any areas cleaned to bare metal with an Ecosea recommended primer for maximum system performance. When using Metprotect 3 in immersion or severe environments, apply over a recommended Ecosea primer. The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion. Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application. Consult the referenced standards, SSPC-PA1 and your Ecosea Representative for additional information or recommendations.

Metprotect 3 can be applied by brush, roll, airless spray and conventional spray application (one grade only). Follow proper mixing instructions before applying.

Mixing: Material temperature must be 3°C (5°F) above the dew point before opening and agitating. Power mix thoroughly prior to application.

Do not keep under constant agitation.

Apply a 6mm, (¼") solvent float over material to prevent moisture intrusion and cover pail.

Brush/ Roller:

Brush: Natural Fibre
Roller: Natural/synthetic fibre cover
Nap: 6-9mm, ¼" to ⅜"
Core: Phenolic
Reduction: Typically not required. If necessary reduce with Metprotect Thinner.

Airless Spray:

Pump Ratio: 28-40:1
Pressure: 2400-2800 psi (170-200 Bar)
Hose: (0.65-0.95cm) ¼" to ⅜"
Tip Size: .015-.021
Filter size: 60 mesh (250µm)
Reduction: Typically not required. If necessary reduce with Metprotect Thinner.

Conventional Spray: (DeVilbiss MBC, JGA or equivalent)

Fluid Nozzle: E Fluid Tip
Air Cap: 704 or 765
Atomising Air: 45-75lbs. (20-34kg)
Fluid Pressure: 15-20lbs. (7-9kg)
Hose: ½" ID; 50' Max
Reduction: Typically not required. If necessary reduce with Metprotect Thinner.

Reducer: Metprotect Thinner. Reduction is typically not required. If necessary, thin up to 10% with recommended thinner. Thin in accordance with local and federal regulatory standards.

Clean Up: Metprotect Thinner. If Ecosea thinners are not available, use MEK, MIBK, Xylene, a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean up only. Do not add unauthorised solvents to an Ecosea coating.

Application Conditions:

Temperature: **-12°-50° C (10°-122° F)**
 This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry. Metprotect Thinner is recommended for spray application in temperatures above 90°F.

Relative Humidity: **6%- 99%**

Coating Accelerator: Metprotect Accelerator. See Ecosea's Metprotect Accelerator Product Data for information.

Storage: Store off the ground in a dry, protected area in temperature between 4-38°C (40-100°F). MCU containers must be kept sealed when not in use. Use a solvent float to reseal partial containers.



Metprotect 3 Technical Data Sheet

Revision date 06/07

Certifications and Qualifications:

VOC Compliant (National Standards – Industrial Maintenance Coating)
Qualified for use in USDA and FDA inspected facilities

Ordering Information:

Package Size: 1 ltr, 5 ltr, 10 ltr Containers
Shelf Life: 12 months from date of shipment
When kept at 24°C (75°F)

Shipping Information:

Flash Point:	26.6°C (80° F)
Weight/Litre:	1.57kg ± .12kg/l
DOT HAZARD CLASS:	3
DOT PACK GROUP:	III
DOT LABEL:	FLAMMABLE LIQUID
DOT SHIPPING NAME:	PAINT
DOT PLACARD:	FLAMMABLE LIQUID
UN/NA NUMBER:	1263

Safety Precautions:

This product is for industrial use only

WARNING: Vapour and spray mist is harmful. Consult the Material Safety Data Sheet. Use an approved respirator when applying this product. Consult the MSDS for recommendations. Protect skin and eyes from contact. This product contains organic solvents and polyisocyanates. Do not use if you have a chronic or allergic reaction to isocyanates or organic solvents.

Warranty:

Ecosea warrants its products to be free from defects in materials. Ecosea's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited at Ecosea's option to either replacement of products not conforming with this warranty or to credit the Buyer's account the invoiced amount of the non-conforming products. Any claim under this warranty must be made by Buyer to Ecosea in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf- life, or six months from the delivery date, whichever is earlier. Buyer's failure to notify Ecosea of such non-conformance as required herein shall bar Buyer from recovery under this warranty. Ecosea makes no other warranties concerning the products. No other warranties, whether expressed, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall Ecosea be liable for consequential or incidental damages.

Any recommendations or suggestions relating to the use of the products made by Ecosea, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so at its sole discretion and risk. Variation in environment, changes in procedures of use or extrapolation of data may cause unsatisfactory results.

Limit of Liability:

Ecosea's liability on any claim of any kind, including claims based upon Ecosea's negligence or strict liability, for any loss or damage arising out of, connected with or resulting from the use of the products, shall in no case exceed the purchase price allowable for the products or part thereof that give rise to the claim. In no event shall be liable for consequential or incidental damages. Published Product Data Sheets are subject to change without notice. Contact your Ecosea Representative for current Product Data Sheets.