

**Product Description:**

Metprotect 1 is Ecosea's universal, moisture-cure urethane primer for ferrous and non-ferrous metal substrates. The design benefit of the penetrating nature of this primer/ sealer allows for superior adhesion to marginally prepared surfaces when compared with most industrial coatings. It is ideal for use as a tie coat over most existing coatings and can be used in red lead encapsulation systems.

**Area of Use:**

**Substrates (correctly prepared)**

Ferrous Metal  
Corten Steel  
Galvanized Metal  
Aluminium/ Non Ferrous Metal

**Possible Uses**

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

**Ready Reference Information:**

**Resin Type:** Urethane  
**Pigment Type:** Proprietary blend

**Sheen:** Flat  
**Colours:** Aluminium

**Volume Solids:** 62.0%± 2.0  
**VOC:** 340 g/l  
(Volatile Organic Content)

**Theoretical Coverage:** (@ 25µm DFT: 24.4 m<sup>2</sup>/l)

**Recommended Film Thickness:**

**Wet:** 61-81 microns  
**Dry:** 38-51 microns- Brush  
38-75 microns- Spray

**Recommended coverage per coat:**  
12.2 m<sup>2</sup>/l at 50 microns DFT- 16.2m<sup>2</sup>/l at 35 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 <sup>1</sup>	6 hrs	<b>1 hr</b>	4 hrs	<b>30 min</b>	3 hrs	<b>20 min</b>
Full Cure	10 days	<b>7 days</b>	7 days	<b>5 days</b>	5 days	<b>4 days</b>

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

1. On clean surface, recoat within 21 days or consult Ecosea

**Product Features:**

- Single component moisture cure urethane.
- No mixing errors. No pot life limitations.
- Low viscosity for penetrating and sealing surfaces.
- Easy to apply by brush, roller or spray methods- one grade.
- No dew point restrictions. (Substrate must be visibly dry)
- Can be applied at 99% humidity.
- Can be applied in below freezing temperatures. (no ice or frost)
- Low VOC.
- Universal primer for various Metal surfaces.
- Compatible with accelerator for faster dry and cure times.

**Ferrous Metal**

Use SSPC-SP1 solvent cleaning to remove oil and grease or other contaminants prior to employing surface preparation methods. Blast Clean surfaces for immersion or severe service projects to ISO 8501-1 SA 2.5 (SSPC-SP10/NACE No. 2) Near White Metal finish OR by SSPC 12/Nace 5.0 High or Ultra High Pressure water jetting methods to WJ 2 (L) very thorough cleaning finish (not applicable for new steel) OR by SSPC-TR2/Nace 6G198 Wet abrasive blast cleaning methods to WAB 10 (L) Wet near white metal blast clean finish. Consult your Ecosea representative for minimal surface preparation. 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 SSP 12/Nace 5.0 High or Ultra High pressure water jetting methods to WJ 4 (M) 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 2 (SSPC-VIS 3 SP 2). Feather-edges of sound, existing paint back to a firm edge. Blast cleaning methods should produce a surface profile of 1.0 - 2.0 mils (25-50 microns).

**Corten Steel**

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods. Supplement SSPC-SP 12 LPWC with ISO 8501-1 St 2 (SSPC-SP 2 or 3) hand or power tool cleaning where areas show excessive corrosion. Use SSPC-SP1 solvent cleaning to remove oil and grease prior to surface preparation methods.

**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 St 2 (SSPC-SP 2 and 3) Hand and Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with mechanical abrasion to impart surface profile and support mechanical adhesion.

**Good Practices**

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. Areas of oxidation after surface preparation and prior to coating application should be prepared to specified standard. Consult the referenced standards, SSPC-PA1 and your Ecosea Representative for additional information or recommendations.

**Surface Preparation**

**Metprotect 1** 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:** 1800-2000 psi (125-140 Bar)  
**Hose:** (0.65-0.95cm) ¼" to ⅜"  
**Tip Size:** .011-.015  
**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.

**Application Information**



## Metprotect 1 Technical Data Sheet

Revision date 06/07

### **Certifications and Qualifications:**

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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:** 1.1 ± .12 kg/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:**

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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:**

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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:**

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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.