

Harwell BrothersTM

Conquering the War on Rust!TM



2955

**Rusty Metal Primer/Finish
Aluminum 0 VOC**

Product Data Sheets



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Harwell Brothers™

2955 0 VOC

A Moisture Cure Urethane Rusty Metal Primer/Finish Aluminum

Product Data Sheets

Product Description

Harwell Brothers 2955 0 VOC, moisture-cure urethane for ferrous, non-ferrous metal, Concrete, and wood substrates. The design benefit of the penetrating nature of this primer/sealer/Finish 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. Does not create surface tension on aged coating systems. A reinforced single component primer suitable for use on surfaces where it is not practical to prepare the substrate by abrasive blasting methods. It may be used on:

- Water and Wastewater Treatment Facilities • Food Processing Facilities
- Pulp and Paper Mills • Tank Exteriors • Hydro-power Facilities and Penstocks
- Material Handling Equipment • Marine/ Port Facilities • Offshore Platforms
- Chemical Processing Facilities • Refineries • Structural Steel
- Ballast Tanks (Salt Water) • Work Boats • and void areas of vessels

Over tight, intact existing surfaces, including rusted metal. As a Moisture Cure Urethane, it has exceptional abrasion resistance which makes it suitable for undersides of railcars and vehicles. 5 can be applied at low temperatures down to 0° F. and at very high dew points if no condensation exists on the substrate. This product incorporates a high level of a surface tolerant anticorrosive pigment which has a platy structure to prevent rust migration which provides long term anticorrosive properties when applied over intact rusty metal. If recoating is required, contact manufacture since the product has a limited recoat window.

Product Feature

- Single Component Moisture Cure Urethane
- No Mixing Errors.
- No Pot Life
- Low viscosity for penetrating and sealing surfaces
- 0 VOC
- Applied at 99% humidity (substrate must be visibly dry)
- Applied in below freezing temperatures (no ice or frost)

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- Aluminum primer for ferrous and non-ferrous metal surfaces
- Easy to apply by brush, roller, mitt, or spray method
- No Dew Point Restrictions (Substrate must be visibly dry)

General Information

Theoretical Coverage: At 1 mil DFT: 1026 ft² /gal at 25 µm DFT: 25.1 m² /l

Recommended Film Thickness: Wet: 2.3 – 3.1 mils (58 - 79 µm) DFT: 1.5 - 2.0 mils (38 - 51 µm)

Recommended Coverage Per Coat: 513 ft² /gal at 2.0 mils DFT - 684 ft² /gal at 1.5 mils DFT (12.5 m² /l at 50 µm DFT - 16.8 m² /l at 38.1 µm DFT)

Thinning: Typically, not required

Clean Up: Oxsol (Parachlorobenzotrfluoride)/SCAMQD Thinner/Acetone

Recommended Systems

Ferrous Metals, Weathering Steel substrates

1st Coat: Harwell Brothers 2955 0 VOC (spot prime) 1.5-2.0 mils DFT

2nd Coat: Harwell Brothers 2955 0 VOC 3.0-5.0 mils DFT

3rd Coat: Harwell Brothers 2823 100 or Harwell Brothers 2833 100, 2.0-4.0 mils DFT

Total System DFT: 6.5-11.0 mils DFT

Ferrous Metals (Saltwater Immersion)

1st Coat: Harwell 2955 0 VOC 1.5-2.0 mils DFT

2nd Coat: Harwell Brothers Tar 2808 100 5.0-7.0 mils DFT

3rd Coat: Harwell Brothers Tar 2808 100 5.0-7.0 mils DFT

Total System DFT: 11.5-16.0 mils DF

Aluminum/Non-ferrous Metals:

1st Coat: Harwell Brothers 2955 0 VOC 1.5-2.0 mils DFT

2nd Coat: : Harwell Brothers 2823 100 or Harwell Brothers 2833 100, 2.0-4.0 mils

Total System DFT: 3.5-6.0 mils DFT

Note: Severely pitted profiles or extremely rough substrates will result in an additional coat of Harwell Brothers 2955 0 VOC.

There are other coating systems also contact your Harwell Brothers personal.

Surface Preparation

Ferrous Metals:

Use SSPC-SP1 solvent cleaning or Bio Degreaser to remove oil and grease or other contaminants prior to employing surface preparation methods. Low-Pressure Water Cleaning (LP WC) Cleaning performed at pressures less than 34 Mpa (5,000 psi) with SaltX or equal to or better removing salts and other

contaminates (this is required). Blast clean surfaces for severe chemical immersion service projects to SSPC-SP10/NACE No. 2 Near White Metal finish. Prepare surfaces for 100 % immersion service projects to SSPC-SP6/NACE No. 3 Commercial Blast Clean finish. For minimum surface preparation use conscientious SSPC-SP2 hand tool cleaning or SSPC-SP3 power tool cleaning methods to remove corrosion and loose or failing paint (feather edges of sound, existing paint back to a firm edge). High Pressure Water Cleaning SSPC-SP12/NACE No.5 to a minimum WJ3/NV2 may also be used to prepare ferrous metal surfaces for atmospheric service projects. Surface preparation methods should produce a surface profile of 1.0 - 2.0 mils (25.4-50.8 µms).

Weathering Steel substrates

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods. Supplement SSPCSP 12 LPWC with SSPC-SP2 and SP3 Hand and Power Tool cleaning where areas show excessive corrosion. Use SSPC-SP1 solvent cleaning to remove oil and grease prior to surface preparation methods. SaltX or equal to or greater is to be always used for removal of salts and contaminants.

Aluminum/Galvanized/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 SSPCSP2 and SP3 Hand and Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with SSPC-SP16 to impart surface profile and support mechanical adhesion. SaltX or equal to or greater will be used at always in cleaning.

Good Practices

Harwell Brothers 2955 0 VOC is designed for application to tightly adhering rust. Heavy pack rust must be removed. Harwell Brothers 2955 0 VOC must have a nominal 2.0 mils thickness above the surface profile. The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, heavy 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 Harwell Brothers Representative for additional information or recommendations

Application Information

Harwell Brothers 2955 0 VOC can be applied by brush, roll, mitt, airless spray, and conventional spray application. Follow proper mixing instructions before applying.

Mixing:

Material temperature must be 5°F above the dew point before opening and agitating. Agitate with mechanical agitation at slow speed to avoid incorporation of moisture. . **Do not keep under constant agitation.** Apply a 3-6 oz solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller:

Brush: Natural Fiber
 Roller: Natural or synthetic fiber cover
 Nap: ¼" to ⅜"
 Core: Phenolic
 Reduction: Typically, not required.

Conventional Spray/HLVP:

	Fluid Tip:	Air Cap:
DeVilbiss-MBC 510	E	765
Binks - Model 18	66	63PB
Atomizing Air: 45 - 75 lbs.		
Fluid Pressure: 15 - 20 lbs.		
Hose: ½" ID; 50' Max		
Reduction: Typically, not required		

Airless Spray:

Pump Ratio: 28:1 - 45:1
 Golden gun/Speeflo Commander 30 with H Gun
 Silver Gun or Contractors Gun
 Tip: .013/ .015/.017 orifice.
 Filter Size: 60 mesh (250 µm)
 Reduction: Typically, not required.
 Do not thin if VOC Regulations are effective.
 Do not add thinner to reduce viscosity
 increase to partial containers remaining
 from previous work.
 Care must be taken to clean spray lines after use to keep material from hardening.

Reducer:

Oxsol (Parachlorobenzotrfluoride)
 SCAMQD Thinner

Clean up:

Oxsol (Parachlorobenzotrfluoride)
 SCAMQD Thinner
 Acetone
 If Acetone is used flush lines with
 SCAMQD Thinner or Oxsol

Application Conditions

Temperature: 20°-100°F (-8°-38° C). This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry and frost free. On applications below 33°F, Steel temperatures should be 5°F above the dew point temperature. Oxsol/ SCAMQD Thinner is recommended for spray application in temperatures above 90°F.

Relative Humidity: 6% - 99%. (Normal 50%-85%)

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

Dry Time:

*At 50% Humidity

	50°F/10°C	75°F/24°C	95°F/35°C
Tack Free	3 Hours	1 ½ Hours	45 minutes
Re-coat Minimum	8 Hours	4 Hours	1 ½ hours
Full Cure	11 days	8 days	6 days
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Testing

Substrate*: Steel/concrete

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*: Harwell Brothers 2955 0 VOC

2 Coats of Harwell brothers 2955 0 VOC 4 mils/100 µms

Test Name	Test Method	Results
Corrosion Weathering	ASTM D5894 2100 hours, 6 cycles	Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering
Dry Heat Resistance	ASTM D2485	300°F (149°C)
Adhesion	ASTM D4541 Steel	1500 PSI
Adhesion	ASTM D4541 Concrete	620 PSI
Direct Impact Resistance	ASTM D2794	150 in. lb.
Salt Fog Resistance	ASTM B117, 6,000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Salt Fog Resistance Rusted Metal	ASTM B117, 6,000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Fall Test	ASTM D968	25 liters

Safety

Material Safety Data Sheets for handling, storage, disposal, and use. NON-WARRANTY: The information herein is based upon the best information available at time of printing and data provided are intended for those having skill and ability to use products as recommended. Harwell Brothers assumes no warranties, either implied or expressed, as to the purchase or application of these products, with the sole exception that if the Seller delivers off standard materials, the Seller will, at its option, either replace the material or refund the full purchase price. Nothing contained herein shall be construed as a recommendation to use this product.