

Selection & Specification Data

Generic Type	Polymeric epoxy amine.	
Description	Rustbond and Rustbond FC are cross-linked penetrating primer/sealers with excellent wetting properties. They are highly flexible with good chemical and solvent resistance, and accept a variety of topcoats. Recommended use as primer/sealers for marginally prepared steel and over old coatings. Their excellent wetting properties allows them to penetrate rust and discontinuities in existing coatings and provide a firm anchorage for a variety of topcoats. Their thixotropic character reduces run off, ensuring that the edges of existing coatings are encapsulated thus reducing undercutting and peeling. They may also be used as a tie-coat for coatings that exceed their "recoat window." Consult Carboline Technical Services Department for specific recommendations.	
Features	<ul style="list-style-type: none"> ▪ Universal primer and tie-coat ▪ Cures down to 35°F (2°C). (FC only) ▪ Excellent adhesion to SSPC-SP 2 prepared steel, galvanizing, aluminum, stainless steel and copper ▪ Low stress, highly flexible film ▪ Extremely high solids ▪ Low odor ▪ Contains corrosion inhibitors ▪ Compatible with a variety of topcoats ▪ User friendly brush and roller application ▪ VOC compliant to current AIM regulations 	
Color	Translucent Green (0300)	
Primers	Self-priming. May be applied over most generic types of coatings.	
Finish	High Gloss. Chalks rapidly in sunlight.	
Topcoats	Acrylics, Alkyds, Epoxies, Polyurethanes, drying oils	
Dry Film Thickness	1.0-2.0 mils (25-50 microns) per coat	
Solids Content By Volume	<u>Rustbond</u> 99% ± 1%	<u>Rustbond FC</u> 90% ± 1%
Theoretical Coverage Rate Rustbond	1572 mil ft ² (38.5 m ² /l at 25 microns) 786 ft ² at 2 mils (19.3 m ² /l at 50 microns) Allow for loss in mixing and application	
Theoretical Coverage Rate Rustbond FC	1443 mil ft ² (38.5 m ² /l at 25 microns) 722 ft ² at 2 mils (19.3 m ² /l at 50 microns) Allow for loss in mixing and application	
VOC Values Rustbond	As supplied: 0.2 lbs./gal (24 g/l) EPA Method 24: 0.7 lbs./gal (85 g/l) Thinned: 6 oz/gal with Thinner #76 0.4 lbs./gal (53 g/l) These are nominal values.*	
VOC Values Rustbond FC	As supplied: 0.7 lbs./gal (85 g/l) EPA Method 24: 1.9 lb/gal (227.62 g/l) 18 oz/gal w/thinner #2 1.49 lbs./gal (178g/l) These are nominal values. *Use Thinner #76 up to 18 oz/gal where non-photochemically reactive solvents are required.	
Dry Temp. Resistance	Continuous: 175°F (80°C) Non-Continuous: 200°F (93°C) Discoloration and loss of gloss is observed above 175°F (80°C).	
Limitations	<ul style="list-style-type: none"> ▪ Epoxies lose gloss, discolor and eventually chalk in sunlight exposure ▪ Do not use for immersion service ▪ Rustbond sealers must be topcoated 	

Substrates & Surface Preparation

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Steel	SSPC-SP2 or SP3
Previously Painted Surfaces	A test patch is recommended to verify compatibility with existing coating. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 "X-Scribe" adhesion test.

Application Equipment

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General guidelines:

Spray Application (General)	Contact Carboline Technical Service for specific application instructions.
Brush & Roller (General)	Avoid excessive re-brushing or re-rolling. Apply enough material to uniformly wet the surface. Any puddles formed must be brushed out.
Brush	Use a medium bristle brush and distribute evenly using full brush strokes.
Roller	Use a short to medium nap roller, suitable for solvent base materials, to evenly distribute the material. Avoid excessive thicknesses.

Mixing & Thinning

Mixing	Power mix components separately to break down any gel. Keep the mixing blade at slow speed and submerged in the product to minimize whipping of air into the material. <u>Scrape the sides of the container occasionally to insure uniformity.</u> Continue to mix for 1-2 minutes. DO NOT MIX PARTIAL KITS, and do not intermix unpaired components.									
Ratio	<table border="0"> <tr> <td></td> <td><u>.5 Gallon Kit</u></td> <td><u>2 Gallon Kit</u></td> </tr> <tr> <td>Rustbond & FC Part A:</td> <td>1 Quart</td> <td>1 Gallon</td> </tr> <tr> <td>Rustbond & FC Part B:</td> <td>1 Quart</td> <td>1 Gallon</td> </tr> </table>		<u>.5 Gallon Kit</u>	<u>2 Gallon Kit</u>	Rustbond & FC Part A:	1 Quart	1 Gallon	Rustbond & FC Part B:	1 Quart	1 Gallon
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Rustbond & FC Part A:	1 Quart	1 Gallon								
Rustbond & FC Part B:	1 Quart	1 Gallon								
Thinning	Thinning not normally required for Rustbond, but may be thinned up to 5% (6 oz/gal) with Thinner #76. Rustbond FC may be thinned up to 15% (18 oz/gal) with Thinner #76 or Thinner #2. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether express or implied.									
Pot Life Rustbond (Qty is ½ gallon)	80 minutes at 70°F (21°C) 50 minutes at 80°F (27°C) 40 minutes at 90°F (32°C) 30 minutes at 100°F (38°C) Pot life ends when material begins to thicken and exotherm.									
Pot Life Rustbond FC (Qty is ½ gallon)	45 minutes at 75°F (28°C), 90 minutes at 40°F and longer at lower temperatures. Do not use above 75°F (28°C) material temperature. Pot life ends when material begins to thicken and exotherm. Any unused quantities will become extremely hot and will generate smoke and fumes. Immediately spread out on an appropriate surface or add sand or other suitable heat sink to the unused material to reduce the severity of exotherm. Take appropriate precautions against breathing fumes.									

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Rustbond® & Rustbond® FC

Cleanup & Safety

Cleanup Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

Ventilation When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.

Caution This product exotherms at the end of its pot life. Any unused quantities will become extremely hot. Immediately spread out on an appropriate surface or add sand or other suitable heat sink to the unused material to reduce the severity of exotherm. Take appropriate precautions against breathing fumes. This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	70°-90°F (21-32°C)	80°-100°F (27-38°C)	80°-100°F (27-38°C)	0-80%
Minimum	60°F (16°C)	70°F (21°C)	70°F (21°C)	0%
Maximum	100°F (38°C)	130°F (54°C)	110°F (43°C)	90%

Condition	Material	Surface	Ambient	Humidity
Normal	40°-70°F (5-21°C)	40°-70°F (5-21°C)	40°-70°F (5-21°C)	0-80%
Minimum	40°F (5°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	75°F (24°C)	90°F (32°C)	90°F (32°C)	80%

These products simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Rustbond

Surface Temp. & 50% Relative Humidity	Dry to Handle	Dry to Topcoat	Final Cure
70°F (21°C)	34 Hours	18 Hours	9 Days
80°F (26°C)	22 Hours	12 Hours	6 Days
90°F (32°C)	14 Hours	9 Hours	4 Days
100°F (38°C)	11 Hours	4 Hours	3 Days

Rustbond FC

Surface Temp. & 50% Relative Humidity	Dry to Handle	Dry to Topcoat	Final Cure
35°F (2°C)	23 Hours	23 Hours	9 Days
50°F (10°C)	18 Hours	18 Hours	6 Days
75°F (24°C)	6 Hours	6 Hours	3 Days
90°F (32°C)	3 Hours	3 Hours	2 Days

These times are based on a 1.0–2.0 mils (25-50 microns) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing.

Rustbond

Surface Temp. & 50% Relative Humidity	Maximum Recoat Time Epoxyes & Urethanes	Maximum Recoat Time Acrylics & Alkyds
50°F (10°C)	30 Days	14 Days
75°F (24°C)	30 Days	14 Days
90°F (32°C)	15 Days	7 Days

Rustbond FC

Surface Temp. & 50% Relative Humidity	Maximum Recoat Time Epoxyes & Urethanes	Maximum Recoat Time Acrylics & Alkyds
35°F (2°C)	21 Days	7 Days
50°F (10°C)	21 Days	7 Days
75°F (24°C)	21 Days	7 Days

If the maximum recoat time is exceeded, the surface must be abraded by sweep blasting, or by the application of another coat of Rustbond FC before applying any additional coatings.

Packaging, Handling & Storage

Shipping Weight (Approximate) Rustbond
 0.5 Gallon Kit: 6 lbs. (3 kg)
 2 Gallon Kit: 22 lbs. (10 kg)

Shipping Weight (Approximate) Rustbond FC
 0.5 Gallon Kit: 5 lbs. (2.2 kg)
 2 Gallon Kit: 19 lbs. (8.6 kg)

Flash Point (Setaflash)
 Rustbond Part A: >205°F (96°C)
 Rustbond Part B: >176°F (80°C)
 Rustbond FC Part A: >45°F (7.2°C)
 Rustbond FC Part B: >42°F (6°C)

Storage Temperature & Humidity
 40° - 110°F (4°-43°C) Store indoors.
 0-90% Relative Humidity

Shelf Life: Rustbond Part A & B: Min. 36 months at 75°F (24°C)
Rustbond FC Part A & B: Min. 36 months at 75°F (24°C)

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**



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