



**Protective
&
Marine
Coatings**

**ENVIROLASTIC® 940 DTM
POLYASPARTIC URETHANE**

**PART A
PART B**

**B65-940
B65V940**

**SERIES
HARDENER**

Revised: February 28, 2018

PRODUCT INFORMATION

5.52

PRODUCT DESCRIPTION

ENVIROLASTIC 940 DTM is a high build, direct-to-metal polyaspartic urethane coating that can be applied in a single coat. This fast drying formula reduces dirt pick up, improves productivity and can be applied at temperatures as low as 35°F.

- Single coat application
- Corrosion resistant
- Cures quickly to improve productivity
- No gassing
- Outstanding application properties
- Direct to metal
- High film build in one coat

PRODUCT CHARACTERISTICS

Finish:	Gloss
Color:	Wide range of colors possible
Volume Solids:	68% ± 2%, mixed, may vary by color
Weight Solids:	80% ± 2%, mixed, may vary by color
VOC (EPA Method 24):	265 g/L; 2.21 lb/gal, mixed, may vary by color
Mix Ratio:	2:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	9.0 (225)	13.0 (325)
Dry mils (microns)	6.0 (150)	9.0 (225)
~Coverage sq ft/gal (m²/L)	121 (3.0)	182 (4.5)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1089 (26.7)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 9.0 mils wet (225 microns):

	35°F/1.6°C	50°F/10°C	77°F/25°C	120°F/49°C
	50% RH			
To touch:	5 hours	3 hours	1 hour	30 minutes
To handle:	16 hours	7 hours	2 hours	1 hour
To recoat:				
minimum:	16 hours	7 hours	2 hours	1 hour
maximum:	3 months	3 months	3 months	45 days
To cure:	7 days	7 days	4 days	2 days
Pot Life:	4 hours	3 hours	2 hours	30 minutes
Sweat-in-Time:	None required			

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:	Part A - 24 months, unopened Part B - 12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	57°F (14°C), mixed (Seta Flash)
Reducer/Clean Up:	Reducer R7K216

RECOMMENDED USES

- Direct to properly prepared steel and galvanizing in industrial environments
- Replaces conventional epoxy/urethane systems
- Ideal for maintenance or new construction applications
- Suitable for use in USDA inspected facilities
- Acceptable for use in high performance architectural applications
- Suitable for use in the Mining & Minerals Industry
- The Envirolastic 940 DTM 1ct. coating system is in full accordance with the requirements of ISO 12944-6 (1998), Corrosivity Category C3 High.

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

1 ct. Envirolastic 940 DTM @ 6.0-9.0 mils (150-225 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	148 mg loss
Adhesion	ASTM D4541	2800 psi
Corrosion Weathering	ASTM D5894	Blisters 10, Rust 10, Scribe Creepage 8
Direct Impact Resistance	ASTM D2794	45 in. lb.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Pencil Hardness	ASTM D3363	H
Salt Fog	ASTM B117 2000 hours	Blisters 2F-2M, Rust 10, Scribe Creepage 8
Corrosivity Category	ISO 12944-6	C3 High at 160 microns and 200 microns



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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Steel:		
1 ct. Envirolastic 940 DTM	6.0-9.0	(150-225)
Galvanizing:		
1 ct. Envirolastic 940 DTM	6.0-9.0	(150-225)
Steel, if primer is required:		
1 ct. Corothane I GalvaPac Zinc Primer	3.0-4.0*	(75-100)
1 ct. Envirolastic 940 DTM	6.0-9.0	(150-225)
Previously Painted Surfaces:		
1 ct. Envirolastic 940	6.0-9.0	(150-225)

other acceptable high performance primers

- Fast Clad Zinc HS
- Macropoxy 646 Epoxy
- Steel Spec Epoxy Primer
- Zinc Clad III HS
- Zinc Clad IV

The systems listed above are representative of the product's use and other other systems may be appropriate. Please contact Sherwin-Williams for compatibility questions.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

Minimum recommended surface preparation:

Iron & Steel: SSPC-SP6/NACE 3, 2 mil (50 micron) profile

Galvanizing: SSPC-SP16, 2 mil (50 micron) profile

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted C St 3	C St 3	SP 3	-
Pitted & Rusted	D St 3	D St 3	SP 3	-

TINTING

Tint with Maxitoner colorants only into Part A Ultra Deep at 100% tint strength and 150% tint strength for Extra White. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature: 35°F (1.6°C) minimum, 120°F (49°C) maximum (air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Part A: ~2 qts. (1.9L) in a 1 gallon can
Part B: ~1 qt. (0.95L) in a 1 quart can

Part A: ~3 gallons (12.04L) in a 5 gallon pail
Part B: ~1.66 gallons (6.28L) in a 2 gallon pail

Weight: 11.4 ± 0.2 lb/gal ; 1.4 Kg/L
mixed, may vary with color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



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APPLICATION BULLETIN

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SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required.

Galvanized Steel

Surface Preparation Specification SSPC-SP 16 must be followed obtaining a surface profile of minimum 2.0 mils (50 microns).

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

APPLICATION CONDITIONS

Temperature: 35°F (1.6°C) minimum, 120°F (49°C) maximum (air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

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 listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up

Above 80°FReducer R7K216
Below 80°FMEK, R6K10
Brush and roll.....Reducer R7K216

Airless Spray

Pump.....30:1
Pressure.....2800 - 3000 psi
Hose.....3/8" ID
Tip0.017" - .021"
Filter60 mesh
Reduction.....As needed up to 5% by volume

Conventional Spray

GunBinks 95
Cap63P
Fluid Tip67
Atomization Pressure.....50-70 psi
Fluid Pressure.....20-25 psi
Reduction.....As needed, up to 10% by volume

Brush (small areas only)

Brush.....Natural bristle
Reduction.....As needed up to 5% by volume

Roller (small areas only)

Cover1/4" woven with solvent resistant core
Reduction.....As needed up to 5% by volume

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	CC St 2	CC St 2	SP 2	-
Pitted & Rusted	DC St 2	DC St 2	SP 3	-
Rusted	CC St 3	CC St 3	SP 3	-
Power Tool Cleaning	DC St 3	DC St 3	SP 3	-

If specific application equipment is not listed above, equivalent equipment may be substituted.



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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine 2 parts by volume of Part A with 1 part by volume of Part B. Thoroughly agitate the mixture with power agitation.

If reducer solvent is used, add only after both components have been thoroughly mixed.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	9.0 (225)	13.0 (325)
Dry mils (microns)	6.0 (150)	9.0 (225)
~Coverage sq ft/gal (m²/L)	121 (3.0)	182 (4.5)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1089 (26.7)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 9.0 mils wet (225 microns):

	@ 35°F/1.6°C	@ 50°F/10°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	5 hours	3 hours	1 hour	30 minutes
To handle:	16 hours	7 hours	2 hours	1 hour
To recoat:				
minimum:	16 hours	7 hours	2 hours	1 hour
maximum:	3 months	3 months	3 months	45 days
To cure:	7 days	7 days	4 days	2 days
Pot Life:	4 hours	3 hours	2 hours	30 minutes
Sweat-in-Time:	None required			

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with MEK, R6K10. Clean tools immediately after use with MEK, R6K10. Follow manufacturer's safety recommendations when using any solvent.

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PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

Do not use Quik-Thane Urethane Accelerator.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

Not intended for use with universal primers

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with MEK, R6K10.

Mixed coating is sensitive to water. Use water traps in all air lines. Moisture contact can reduce pot life and affect gloss and color.

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

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