Protective & Marine Coatings

HI-SOLIDS POLYURETHANE 250
ALIPHATIC POLYURETHANE

PART S	B65J-300 SERIES	GLOSS
PART S	B65J-350 SERIES	SEMI-GLOSS
PART T	B60V30	HARDENER

Revised: August 12, 2026

PRODUCT INFORMATION

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PRODUCT DESCRIPTION

HI-SOLIDS POLYURETHANE 250 is a two-component, aliphatic, acrylic polyurethane resin coating. It is designed for high performance protection with outstanding exterior gloss and color retention.

- Good/excellent resistance to corrosion and weathering
- Outstanding color and gloss retention
- Chemical resistant
- Suitable for use in USDA inspected facilities
- Formerly named Hi-Solids Polyurethane CA
- Resists film attack by mildew (MR White Tint Base only, B65WWJ305)
- Applications down to 20°F (-7°C)

PRODUCT CHARACTERISTICS

Finish: Gloss and Semi-Gloss

Color: Wide range of colors possible

Volume Solids: 63% ± 4%, may vary by color or sheen
Ultra White

Weight Solids: 74% ± 2%, may vary by color or sheen
Ultra White

VOC (EPA Method 24): <250 g/L; 2.08 lb/gal Mixed

Mix Ratio: 4:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.5** (112.5)	**8.0** (200)
Dry mils (microns)	**3.0** (75)	**5.0** (125)
~Coverage sq ft/gal (m^2/L)	**208** (5.2)	**347** (8.5)

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

Drying Schedule @ 4.5 mils (112.5 microns) wet:

	@ 20°F/-7°C	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	16 hours	4 hours	2 hours	1 hour
To handle:	14 days	16 hours	8 hours	5 hours
To recoat:				
minimum:	32 hours	24 hours	18 hours	10 hours
maximum:	unlimited	30 days	30 days	30 days
To cure:	40 days	14 days	10 days	7 days

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

Pot Life:	3 days	8 hours	4 hours	2 hours
Sweat-in-Time:	None required			

PRODUCT CHARACTERISTICS (CONT'D)

Shelf Life: Part S: 36 months, unopened
Part T: 24 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 65°F (18°C), mixed

Reducer/Clean Up*: Oxsol 100 or R7K111

*Other reducers such as Reducer #58 can be used in VOC areas >250 g/L. Consult your Sherwin-Williams Representative. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

RECOMMENDED USES

For use over prepared substrates in industrial environments
- Heavy duty interior and exterior structural coating
- A chemical and abrasion resistant equipment and machinery finish
- A gloss and color retentive heavy duty maintenance coating for use in "high visibility" areas
- Exterior surfaces of steel tanks
- Refineries
- Clean rooms
- Chemical processing equipment
- Conveyors
- Handrails
- Exterior metal siding and trim
- Rolling stock
- Paper mills
- Precipitator surfaces
- Power plants
- Oil Field Machinery
- Offshore structures
- Marine Applications
- Conforms to AWWA D102 Outside Coating Systems #5 & #6
- Approved finish coat for FIRETEX M90 and M93 series systems (Gloss only)
- Approved topcoat for NEPCOAT System B

PERFORMANCE CHARACTERISTICS

Substrate*: Steel
Surface Preparation*: SSPC-SP6
System Tested*:
1 ct. Zinc CLad 4100 @ 4.0 mils (100 microns) dft
1 ct. Macropoxy 646 @ 7.5 mils (188 microns) dft
1 ct. Hi-Solids polyurethane 250 @ 4.0 mils (100 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	119 mg loss
Adhesion	ASTM D4541	2253 psi
Corrosion Weathering	ASTM D5894, 15 cycles	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting
Direct Impact Resistance	ASTM D2794	40 in. lbs.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 1000 hours	No rusting, blistering, or delamination
Pencil Hardness	ASTM D3363**	F
Salt Fog Resistance	ASTM B117, 5,000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting

Meets the requirements of SSPC Paint No. 36, Level 3 for white and light colors.

** Ultradeep bases will result in slightly softer film due to increased tint loading

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	Microns
Steel: Epoxy Primer			
1 ct.	Macropoxy 240	3.0-5.0	(75-125)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Steel: Epoxy Primer			
1 ct.	Macropoxy 646	4.0-6.0	(100-150)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Steel: Zinc Rich Primer			
1 ct.	Zinc Clad 4100	3.0-5.0	(75-125)
1 ct.	Macropoxy 646	3.0-10.0	(75-250)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Steel: Epoxy Mastic Primer			
1 ct.	Macropoxy 646	5.0-10.0	(125-250)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Aluminum:			
1 ct.	DTM Wash Primer	0.7-1.3	(17.5-32.5)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Concrete:			
1 ct.	Kem Cati-Coat Epoxy HS Filler/Sealer	10.0-15.0	(250-375)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Galvanized Metal:			
1 ct.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Galvanized Metal:			
1 ct.	ProCryl Universal Primer	2.0-4.0	(50-100)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
Galvanized Metal:			
1 ct.	Macropoxy 646	4.0-6.0	(100-150)
1-2 cts.	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
NTPEP System			
1 ct.	Zinc Clad 4100	3.0-5.0	(75-125)
1 ct.	Macropoxy 646	3.0-5.0	(75-125)
1-2 cts.	Hi-Solids Polyurethane 250 SG	3.0-5.0	(75-125)

The systems listed above are representative of the product's use, other systems may be appropriate.

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.

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.

Minimum recommended surface preparation:

* Iron & Steel: SSPC-SP6/NACE 3, 2 mil (50 micron) profile
* Aluminum: SSPC-SP1
* Galvanizing: SSPC-SP1
* Concrete & Masonry: SSPC-SP13/NACE 6

* Primer Required

Surface Preparation Standards

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

TINTING

Tint with GIS colorants into part S only. *Maximum amount of tint is 8 fl oz for the EW & 18 fl oz for the UD. Most colors typically utilize about 3-5 ounces with EW bases and 6-12 ounces with UD bases.*

APPLICATION CONDITIONS

Temperature:	20°F (-7°C) minimum, 120°F (49°C) maximum (air, surface, and material) Do not apply over surface ice 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 S:	1 gallon (3.78L) and 4 gallon (15.12L) kits
Part T:	quarts and gallons
Weight:	10.7 ± 0.2 lb/gal ; 1.3 Kg/L mixed, may vary with color

SAFETY PRECAUTIONS

Refer to the SDS 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 (2-3 mils / 50-75 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
Allow to weather a minimum of six months prior to coating. Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with ArmorSeal Crack Filler. Weathered masonry and soft or porous cement board must be brush blasted or power tool cleaned to remove loosely adhering contamination and to get to a hard, firm surface. Laitance must be removed by etching with a 10% muriatic acid solution and thoroughly neutralized with water. Primer required. Brick must be allowed to weather for one year prior to surface preparation and painting.

Surface Preparation Standards

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

APPLICATION CONDITIONS

Temperature:	20°F (-7°C) minimum, 120°F (49°C) maximum (air, surface, and material) Do not apply over surface ice 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* .....Oxsol 100 or R7K111

*Other reducers such as Reducer #58 can be used in VOC areas >250 g/L. Consult your Sherwin-Williams Representative. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

Airless Spray
Pressure.....2500 - 2800 psi
Hose.....3/8" ID
Tip .....013" - .017"
Filter .....none
Reduction.....As needed up to 10% by volume

Conventional Spray
Gun .....Binks 95
Fluid Nozzle .....63 B
Air Nozzle.....69 PB
Atomization Pressure ....50 - 70 psi
Fluid Pressure.....20 - 25 psi
Reduction.....As needed up to 10% by volume

Brush
Brush.....Natural bristle
Reduction.....As needed up to 10% by volume

Roller
Cover .....3/8" woven with phenolic core
Reduction.....As needed up to 10% by volume

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

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APPLICATION BULLETIN

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Mix contents of each component thoroughly with power agitation. Make certain no pigment remains on the bottom of the can. Then combine 4 parts by volume of Part S with 1 part by volume of Part T. 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)	**4.5** (112.5)	**8.0** (200)
Dry mils (microns)	**3.0** (75)	**5.0** (125)
~Coverage sq ft/gal (m^2/L)	**208** (5.2)	**347** (8.5)

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

Drying Schedule @ 4.5 mils (112.5 microns) wet:

	@ 20°F/-7°C	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	16 hours	4 hours	2 hours	1 hour
To handle:	14 days	16 hours	8 hours	5 hours
To recoat:				
minimum:	32 hours	24 hours	18 hours	10 hours
maximum:	unlimited	30 days	30 days	30 days
To cure:	40 days	14 days	10 days	7 days
Pot Life:	3 days	8 hours	4 hours	2 hours
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 Oxsol 100 or R7K111. Clean tools immediately after use with Oxsol 100 or R7K111. 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 apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Oxsol 100 or R7K111. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

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

Quik-Thane Urethane Accelerator is acceptable for use. See Quik-Thane Urethane Accelerator product data sheet for details.

E-Z Roll Urethane Defoamer is acceptable for use. See E-Z Roll Urethane Defoamer product data sheet for details.

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

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