



SHERWIN-WILLIAMS®

Product Submittal

Administration Building Exterior Steel

Presented By:

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SHERWIN-WILLIAMS

106 W LIBERTY ST

SUMTER, SC 29150 5142

(803) 775-4323

March 30, 2022



SHERWIN-WILLIAMS®

Product Submittal

Project: Administration Building Exterior Steel
411 Sunset Dr., Manning, SC, 29102

Dear Tamika:

Thank you for considering Sherwin-Williams products for the Administration Building Exterior Steel project. Included in this package is the Sherwin-Williams submittal for the above referenced project.

Should you require assistance or have any questions or concerns, please contact me at (803) 464-8180 or e-mail me at matthew.c.stutz@sherwin.com.

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Exterior Finishes

Steel/Ferrous Metal

Coat 1: B58T00604 - Macropoxy® 646 Fast Cure Epoxy Part A Ultradeep/Clear Tint Base

- Location: Exterior Steel

Notes: Match Existing Color

Coat 2: B65T00354 - Hi-Solids Polyurethane Semi-Gloss Ultradeep/Clear Tint Base Part S

- Location: Exterior Steel

Notes: Match Existing Color

Coat 3: B65T00354 - Hi-Solids Polyurethane Semi-Gloss Ultradeep/Clear Tint Base Part S

- Location: Exterior Steel

Notes: Match Existing Color



SHERWIN-WILLIAMS.

Basic Surface Preparation

Coating performance is directly affected by surface preparation. Coating integrity and service life will be reduced because of improperly prepared surfaces. As high as 80% of all coating failures can be directly attributed to inadequate surface preparation that affects coating adhesion. Proper product selection, surface preparation, and application affect coating performance. Coating integrity and service life will be reduced because of improperly prepared surfaces. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system.

The majority of paintable surfaces are concrete, ferrous metal, galvanizing, wood and aluminum. They all require protection to keep them from deteriorating in aggressive environments. Selection of the proper method for surface preparation depends on the substrate, the environment, the coating selected, and the expected service life of the coating system. Economics, surface contamination, and the effect on the substrate will also influence the selection of surface preparation methods. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

Verify the existence of lead based paints on the project. Buildings constructed after 1978 are less likely to contain lead based paints. If lead based paints are suspected on the project, all removal must be done in accordance with the EPA Renovation, Repair and Painting and all applicable state and local regulations. State and local regulations may be more strict than those set under the federal regulations. Verify that Owner has completed a Hazardous Material Assessment Report for the project prior to issuing of Drawings. Concluding that no lead based paints were found on project site, delete paragraph regarding lead based paints.

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority. Removal must be done in accordance with EPA Renovation, Repair and Painting Rule and all related state and local regulations. Care should be taken to follow all state and local regulations which may be more strict than those set under the federal RRP Rule.

No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50°F, unless the products to be used are designed to be used in those environments.

Aluminum – S-W 1: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.

Block (Cinder and Concrete) – S-W 3: 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. Concrete and mortar must be cured at least 28 days at 75°F. The pH of the surface should be between 6 and 9. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound (per ASTM D4261).

Brick – S-W 4: Must be free of dirt, loose and excess mortar, and foreign material. All brick should be allowed to weather for at least one year followed by wire brushing to remove efflorescence. Treat the bare brick with one coat of Loxon Conditioner.

Concrete and Masonry – Concrete, Poured – Exterior or Interior – S-W 5: The preparation of new concrete surfaces is as important as the surface preparation of steel. The following precautions will help assure maximum performance of the coating system and satisfactory coating adhesion:

- 1. Cure** – Concrete must be cured prior to coating. Cured is generally defined as concrete poured and aged at a material temperature of at least 75°F for at least 28 days unless specified products are designed for earlier application.
- 2. Moisture** – Reference ASTM F1869-98 Moisture Test by use of Calcium Chloride or ASTM D4263 Plastic Sheet Method. Concrete must be free from moisture as much as possible (it seldom falls below 15%). Vapor pressures, temperature, humidity, differentials, and hydrostatic pressures can cause coatings to prematurely fail. The source of moisture, if present, must be located, and the cause corrected prior to coating.
- 3. Temperature** – Air, surface and material temperatures must be in keeping with requirements for the selected product during and after coating application, until coating is cured.

4. Contamination – Remove all grease, dirt, paint, oil, laitance, efflorescence, loose mortar, and cement by the recommendations listed in the surface preparation section.

5. Surface Condition – Hollow areas, bug holes, voids, honeycombs, fin form marks, and all protrusions or rough edges are to be ground or stoned to provide a continuous surface of suitable texture for proper adhesion of the coating. Imperfections may require filling, as specified, with a recommended Sherwin-Williams product.

6. Concrete Treatment – Hardeners, sealers, form release agents, curing compounds, and other concrete treatments should be removed to ensure adequate coating adhesion and performance.

Methods of Surface Preparation on Concrete per SSPC-SP13/NACE 6 or ICRI 03732 Surface Cleaning Methods: Vacuum cleaning, air blast cleaning, and water cleaning per ASTM D4258.

Used to remove dirt, loose material, and/or dust from concrete.

Detergent water cleaning and steam cleaning per ASTM D4258.

Used to remove oils and grease from concrete. Prior to abrasive cleaning, and after abrasive cleaning, surfaces should be cleaned by one of the methods described above.

Mechanical Surface Preparation Methods:

Dry abrasive blasting, wet abrasive blasting, vacuum assisted abrasive blasting, and centrifugal shot abrasive blasting per ASTM D4259. Used to remove contaminants, laitance, and weak concrete, to expose subsurface voids, and to produce a sound concrete surface with adequate profile and surface porosity.

High-pressure water cleaning or water jetting per SSPC-SP12-NACE5.

Used to remove contaminants, laitance, and weak concrete, to expose subsurface voids, and to produce a sound concrete surface with adequate profile and surface porosity.

Impact tool methods per ASTM D4259.

Used to remove existing coatings, laitance, and weak concrete. Methods include scarifying, planing, scabbling, and rotary peening. Impact tools may fracture concrete surfaces or cause microcracking requiring surface repair.

Power tool methods per ASTM D4259.

Used to remove existing coatings, laitance, weak concrete, and protrusions in concrete. Methods include circular grinding, sanding, and wire brushing. These methods may not produce the required surface profile to ensure adequate adhesion of subsequent coatings.

Chemical Surface Preparation Methods:

Acid etching per ASTM D4260. Use to remove some surface contaminants, laitance, and weak concrete, and to provide a surface profile on horizontal concrete surfaces. This method requires complete removal of all reaction products and pH testing to ensure neutralization of the acid. Not recommended for vertical surfaces. Etching with hydrochloric acid shall not be used where corrosion of metal in the concrete is likely to occur. Adequate ventilation and safety equipment required.

1. Clean surface per ASTM D4268
2. Wet surface with clean water
3. Etch with 10-15% muriatic acid solution at the rate of 1 gallon per 75 square feet
4. Scrub with stiff brush
5. Allow sufficient time for scrubbing and until bubbling stops
6. If no bubbling occurs, surface is contaminated. Refer to ASTM D4258 or ASTM D4259
7. Rinse surface two or three times. Remove acid/water each time.
8. Surface should have a texture similar to medium grit sandpaper.
9. Neutralize surface with a 3% solution of tri-sodium phosphate and flush with clean water.
10. Allow to dry and check for excess moisture.

Cement Composition Siding/Panels – S-W 6: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Glossy surfaces should be sanded dull. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. If the surface is new, test it for pH, many times the pH may be 10 or higher.

Composition Board (Hardboard) – S-W 9: Some composition boards may exude a waxy material that must be removed with a solvent prior to coating. Whether factory primed or unprimed, exterior composition board siding (hardboard) must be cleaned thoroughly and primed with an alkyl primer.

Copper – S-W 7: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP2, Hand Tool Cleaning.

Drywall—Interior and Exterior – S-W 8: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting. Exterior surfaces must be spackled with exterior grade compounds.

Galvanized Metal – S-W 10: Allow to weather a minimum of 6 months prior to coating. Clean per SSPC-SP1 using detergent and water or a degreasing cleaner, then prime as required. 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 area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.

Plaster – S-W 11: Must be allowed to dry thoroughly for at least 30 days before painting. Room must be ventilated while drying; in cold, damp weather, rooms must be heated. Damaged areas must be repaired with an appropriate patching material. Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1 pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.

Steel/Ferrous Metal Substrates

SSPC-SP1- Solvent Cleaning: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation. Follow manufacturer's safety recommendations when using solvents. For complete instructions, refer to Steel Structures Paint Council Surface Preparation Specification No.1. (Refer to each products cleaning instructions. Many acrylic coatings will state; When cleaning the surface per SSPC-SP1, use only an emulsifying industrial detergent, followed by a water rinse. **Do not use hydrocarbon solvents for cleaning.**)

SSPC-SP2 - Hand Tool Cleaning: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mil scale, rust, and paint are considered adherent if they cannot be removed by lifting with a dull putty knife. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1. For complete instructions, refer to Steel Structures Paint Council Surface Preparation Specification No.2.

SSPC-SP3 - Power Tool Cleaning: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mil scale, rust, and paint are considered adherent if they cannot be removed by lifting with a dull putty knife. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1. For complete instructions, refer to Steel Structures Paint Council Surface Preparation Specification No.3.

SSPC-SP5 / NACE 1 - White Metal Blast Cleaning: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods. For complete instructions, refer to Joint Surface Preparation Standard SSPC-SP5/ NACE No.1.

SSPC-SP6 / NACE 3 - Commercial Blast Cleaning: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods. For complete instructions, refer to Joint Surface Preparation Standard SSPC-SP6/NACE No.3.

SSPC-SP7 / NACE 4 - Brush-Off Blast Cleaning: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Mil scale, rust, and coating are considered adherent if they cannot be removed by lifting with a dull putty knife. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods. For complete instructions, refer to Joint Surface Preparation Standard SSPC-SP7/NACE No.4.

SSPC-SP10 / NACE 2 - Near-White Blast Cleaning: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods. For complete instructions, refer to Joint Surface Preparation Standard SSPCSP10/ NACE No.2.

SSPC-SP11 - Power Tool Cleaning to Bare Metal: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP 1, Solvent Cleaning, or other agreed upon methods. For complete instructions, refer to Steel Structures Paint Council Surface Preparation Specification No.11.

SSPC-SP12 / NACE 5 - Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating: High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only, without the addition of solid particles in the stream. For complete instructions, refer to Joint Surface Preparation Standard SSPC-SP12/NACE No.5.

SSPC-SP13 / NACE 6 or ICRI 03732 - Surface Preparation of Concrete: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a dry, sound, uniform substrate suitable for the application of protective coating or lining systems. Depending upon the desired finish and system, a block filler may be required. For complete instructions, refer to Joint Surface Preparation Standard SSPC-SP13/NACE No.6 or ICRI 03732

SSPC-SP14 / NACE 8 – Industrial Blast Cleaning: This standard gives requirements for industrial blast cleaning of unpainted or painted steel surfaces by the use of abrasives. This joint standard allows defined quantities of mill scale and/or old coating to remain on the surface. An industrial blast cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dust, and dirt. Traces of tightly adherent mill scale, rust, and coating residue are permitted to remain on 10% of each unit area of the surface. The traces of mill scale, rust, and coating shall be considered tightly adherent if they cannot be lifted with a dull putty knife. Shadows, streaks, and discolorations caused by stains of rust, stains of mill scale, and stains of previously applied coating may be present on the remainder of the surface.

SSPC-SP16 Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals: This standard covers the requirements for brush-off blast cleaning of uncoated or coated metal surfaces other than carbon steel by the use of abrasives. These requirements include visual verification of the end condition of the surface and materials and procedures necessary to achieve and verify the end condition. A brush-off blast cleaned non-ferrous metal surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, metal oxides (corrosion products), and other foreign matter. Intact, tightly adherent coating is permitted to remain. A coating is considered tightly adherent if it cannot be removed by lifting with a dull putty knife.

High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials:

SSPC-SP WJ-1/NACE WJ-1: Clean to Bare Substrate (WJ-1) is intended to be similar to the degree of surface cleanliness of SSPC-SP 5/NACE 1, except that stains are permitted to remain on the surface. This standard is used when the objective is to remove every trace of rust and other corrosion products, coating and mill scale.

SSPC-SP WJ-2/NACE WJ-2: Very Thorough Cleaning (WJ-2) is intended to be similar to the degree of surface cleanliness of SSPC-SP 10/NACE 2, except that tightly adherent material, rather than only stains, is permitted to remain on the surface. This standard is used when the objective is to remove almost all rust and other corrosion products, coating, and mill scale.

SSPC-SP WJ-3/NACE WJ-3: Thorough Cleaning (WJ-3) is intended to be similar to the degree of surface cleanliness of SSPC-SP 10/NACE 2, except that tightly adherent material, rather than only stains, is permitted to remain on the surface. This standard is used when the objective is to remove much of the rust and other corrosion products, coating, and mill scale, leaving tightly adherent thin films.

SSPC-SP WJ-4/NACE WJ-4: Light Cleaning (WJ-4) is intended to be similar to the degree of surface cleanliness of SSPC-SP 10/NACE 2, except that tightly adherent material, rather than only stains, is permitted to remain on the surface. This standard is used when the objective is to allow as much of the tightly adherent rust and other corrosion products, coating, and mill scale to remain as possible, Discoloration of the surface may be present.

Water Blasting NACE Standard RP-01-72: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

Stucco S-W 22 : Must be clean and free of any loose stucco. If recommended procedures for applying stucco are followed, and normal drying conditions prevail, the surface may be painted in 30 days. The pH of the surface should be between 6 and 9.

Wood—Exterior – S-W 23: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth. Caulk should be applied after priming.

Wood—Interior – S-W 24: All finishing lumber and flooring must be stored in dry, warm rooms to prevent absorption of moisture, shrinkage, and roughening of the wood. All surfaces must be sanded smooth, with the grain, never across it. Surface blemishes must be corrected and the area cleaned of dust before coating.

Vinyl Siding, Architectural Plastics, PVC & Fiberglass: – S-W 24: Clean the surface thoroughly by scrubbing with warm, soapy water. Rinse thoroughly, prime with appropriate white primer. Do not paint vinyl with any color darker than the original color. Do not paint vinyl with a color having a Light Reflective Value (LRV) of less than 56 unless VinylSafe® Colors are used. If VinylSafe® Colors are not used and darker colors lower than an LRV of 56 are, the vinyl may warp. Follow all painting guidelines of the vinyl manufacturer when painting. Only paint properly installed vinyl siding. Deviating from the manufacturer's painting guidelines may cause the warranty to be voided.

Previously Coated Surfaces – S-W 12: Maintenance painting will frequently not permit or require complete removal of all old coatings prior to repainting. However, all surface contamination such as oil, grease, loose paint, mill scale dirt, foreign matter, rust, mold, mildew, mortar, efflorescence, and sealers must be removed to assure sound bonding to the tightly adhering old paint. Glossy surfaces of old paint films must be clean and dull before repainting. Thorough washing with an abrasive cleanser will clean and dull in one operation, or, wash thoroughly and dull by sanding. Spot prime any bare areas with an appropriate primer. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system. Check for compatibility by applying a test patch of the recommended coating system, covering at least 2 to 3 square feet. Allow to dry one week before testing adhesion per ASTM D3359. If the coating system is incompatible, complete removal is required per ASTM D4259.

Touch-Up, Maintenance and Repair

For a protective coating system to provide maximum long-term protection, regularly scheduled maintenance is required. Maintenance includes inspection of painted areas, cleaning of surfaces to remove oils, chemicals, and other contaminants, and touch-up of areas where the coatings have been damaged. Highly corrosive areas, such as those subjected to frequent chemical spillage, corrosive fumes, and/or high abrasion or temperature areas should be inspected frequently – every six months, for example. Areas exposed to less severe conditions, such as interiors and exteriors of potable water tanks, may be inspected annually to assess the condition of the coating system.

The SSPC-VIS 2, Standard Method for Evaluating Degree of Rusting on Painted Steel Surfaces, can be used as a guide to determine appropriate touch-up and repairs maintenance schedules. Touch-up would be suggested when the surface resembles Rust Grade 5-S (Spot Rusting), 6-G (General Rusting), or 6-P (Pinpoint Rusting). Surface preparation would generally consist of SSPC-SP2, SP3, SP11, or SP12. Overcoating a well protected, but aged steel surface showing no evidence of rusting, may be achieved by Low Pressure Water Cleaning per SSPC-SP12/WJ4, and applying an appropriate coating system.

Full removal of the existing coating system by abrasive blasting would be recommended when the surface resembles Rust Grade 3-S (Spot Rusting), 4-G (General Rusting), or 4-P (Pinpoint Rusting). When the coating system has deteriorated to encompass approximately 33% of the surface area, it is always more economical to consider full removal and reapplication of the appropriate protective coating system.

Mildew –Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised.

Mildew may be removed before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.



SHERWIN-WILLIAMS®

Reference Pages

Data Pages



Protective & Marine Coatings
PRODUCT DATA SHEET



MACROPOXY® 646
FAST CURE EPOXY MASTIC

Revised: February 4, 2022

PRODUCT DESCRIPTION

MACROPOXY 646 Fast Cure Epoxy Mastic is a high solids, high build, fast drying, polyamide epoxy designed to protect steel and concrete in industrial exposures. Ideal for maintenance painting and fabrication shop applications. The high solids content ensures adequate protection of sharp edges, corners, and welds. This product can be applied directly to marginally prepared steel surfaces.

INTENDED USES

- Recommended for marine applications, refineries, offshore platforms, fabrication shops, chemical plants, tank exteriors, power plants, water treatment plants, and mining and minerals industry
- Limited colors are acceptable for immersion use for salt water and fresh water, not acceptable for potable water

PRODUCT DATA

Finish: Semi-Gloss
Colors: Mill White, Black and a wide range of colors available through tinting
Volume Solids: 72% ± 2%, mixed, Mill White
VOC (mixed): <250 g/L; 2.08 lb/gal
Mix Ratio: 1:1 by volume

Typical Thickness:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	7.0 (175)	13.5 (338)
Dry mils (microns)	5.0* (125)	10.0 (250)
~Coverage sq ft/gal (m²/L)	115 (2.9)	230 (5.8)

Theoretical coverage **sq ft/gal (m²/L) @ 1 mil / 25 microns dft** **1152** (28.2)

*May be applied at 3.0-10.0 mils (75-250 microns) dft as an intermediate in a multicoat system.

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

Shelf Life: 36 months, unopened
Store indoors at 40°F (4.5°C) to 110°F (43°C).

Flash Point: 91°F (33°C), TCC, mixed

Reducer/Clean Up¹: VOC Restricted Areas (<250 g/L): use Reducer #111 or Oxsol 100

Weight: 12.9 ± 0.2 lb/gal ; 1.55 Kg/L, mixed, may vary by color

¹Other areas (<340 g/L): use Reducer #111, Oxsol 100, or Reducer #15 up to 10%. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

Average Drying Times @ 7.0 mils (175 microns) wet:

	35°F (1.7°C)	77°F (25°C)	100°F (38°C)
	50% RH	50% RH	50% RH
Touch:	4-5 hours	2 hours	1.5 hours
Handle:	48 hours	8 hours	4.5 hours

Recoat:
minimum: 48 hours 8 hours 4.5 hours
maximum: 1 year 1 year 1 year

Cure to service:
atmospheric: 10 days 7 days 4 days
immersion: 14 days 7 days 4 days

Average Drying Times as intermediate @ 5.0 mils (125 microns) wet:

Touch:	3 hours	1 hour	1 hour
Handle:	48 hours	4 hours	2 hours
Recoat:			
minimum:	16 hours	4 hours	2 hours
maximum:	1 year	1 year	1 year

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent. Paint temperature must be 40°F (4.5°C) minimum.

Pot Life: 10 hours 4 hours 2 hours
Sweat-in-time: 30 minutes 30 minutes 15 minutes

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.

Minimum recommended surface preparation:

Iron & Steel:	Atmospheric: SSPC-SP2/3/ ISO8501-1:2007 St 2 or SSPC-SP WJ-3 / NACE WJ-3L Immersion: SSPC-SP10 / NACE 2/ ISO8501-1:2007 Sa 2.5, 2-3 mil (50-75 micron) profile or SSPC-SP WJ-2/NACE WJ-2L
Stainless Steel:	Atmospheric: SSPC-SP16, 1 mil (25 micron) profile
Aluminum & Galvanizing:	SSPC-SP1. If surface has not been weathered for more than 6 months, follow SSPC-SP1 then SSPC-SP16. For fire proofing projects, consult a Sherwin-Williams representative for surface preparation requirements.
Concrete & Masonry:	Atmospheric: SSPC-SP13/NACE 6, or ICRI No. 310.2R CSP 1-3 Immersion: SSPC-SP13/NACE 6-4.3.1
Ductile Iron Pipe:	Atmospheric: NAPF 500-03-03 Power Tool Cleaning Buried & Immersion: NAPF 500-03-04 Abrasive Blast Cleaning Cast Ductile Iron Fittings: NAPF 500-03-05 Abrasive Blast Cleaning



Protective & Marine Coatings
PRODUCT DATA SHEET



MACROPOXY® 646

FAST CURE EPOXY MASTIC

APPLICATION	APPLICATION CONDITIONS																																																																					
<p>Airless Spray*</p> <p>Pump 30:1 Pressure 2800-3000 psi (193-206 bar) Hose 1/4" ID (6.3 mm) Tip 0.17"-0.23" (0.43-0.58 mm) Filter 60 mesh Reduction As needed up to 10% by volume</p> <p>Conventional Spray*</p> <p>Gun DeVilbiss MBC-510 Fluid Tip E Air Nozzle 704 Atomization Pressure 60-65 psi (4.1-4.5 bar) Fluid Pressure 10-20 psi (0.7-1.4 bar)</p> <p>Brush*</p> <p>Brush Nylon/Polyester or Natural Bristle</p> <p>Roller*</p> <p>Cover 3/8" woven with solvent resistant core</p> <p>Plural Component Spray Acceptable</p> <p>*Reduction¹ VOC Restricted Areas (<250 g/L): use Reducer #111 or Oxsol 100</p> <p>¹Other areas (<340 g/L): use Reducer #111, Oxsol 100, or Reducer #15 up to 10%. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.</p> <p>If specific application equipment is not listed above, equivalent equipment may be substituted.</p>	<p>Temperature:</p> <p>Air: 35°F (1.7°C) minimum, 120°F (49°C) maximum Surface*: 35°F (1.7°C) minimum, 250°F (120°C) maximum Material: 40°F (4.5°C) minimum At least 5°F (2.8°C) above dew point</p> <p>Relative humidity: 85% maximum</p> <p>*Application to surfaces above 120°F (49°C) is not recommended in VOC Restricted Areas (≤250 g/L). When spraying a surface above 120°F (49°C) in other areas (>250 g/L), please consult with your Sherwin-Williams representative.</p>																																																																					
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	<ul style="list-style-type: none"> Suitable for use in USDA inspected facilities Acceptable for use in Canadian Food Processing facilities, categories: D1, D2, D3 (Confirm acceptance of specific part numbers/rexes with your SW Sales Representative) Conforms to AWWA D102 OCS #5 Conforms to MPI # 108 This product meets specific design requirements for non-safety related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities* Meets Class A requirements for Slip Coefficient, 0.36 @ 6 mils / 150 microns dft (Mill White only) Approved intermediate for NEPCOAT System B Approved to Norsok M501 system 7B (limited colors) <p>* Nuclear qualifications are NRC license specific to the facility</p>																																																																					
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<p>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.</p>	<p>Refer to the SDS sheet before use.</p> <p>Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.</p>																																																																					
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Protective & Marine Coatings

HI-SOLIDS POLYURETHANE

PART S B65-300 GLOSS SERIES
PART S B65-350 SEMI-GLOSS SERIES
PART S B65WW305 MR, WHITE TINT BASE (GLOSS)
PART T B60V30 HARDENER

Revised: November 5, 2020

PRODUCT INFORMATION

5.21

PRODUCT DESCRIPTION

HI-SOLIDS POLYURETHANE 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
- Part of a system tested for nuclear irradiation and decontamination, Level II
- Resists film attack by mildew (MR White only)
- Outstanding application properties
- Applications down to 20°F (-7°C)

PRODUCT CHARACTERISTICS

Finish: High Gloss or Semi-Gloss
Color: Wide range of colors possible
Volume Solids: 65% ± 2%, mixed, may vary by color
Weight Solids: 77% ± 2%, mixed, may vary by color
VOC (EPA Method 24): Unreduced: <300g/L; 2.50 lb/gal, mixed
 Reduced 6%: <340 g/L; 2.84 lb/gal, mixed
 may vary by color/reducer*

*see Application Equipment section on Page 3 for more details

Mix Ratio: 4:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.5 (112)	8.0 (200)
Dry mils (microns)	3.0 (75)	5.0 (125)
~Coverage sq ft/gal (m ² /L)	208 (5.1)	347 (8.5)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1040 (25.5)	

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

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: 80°F (27°C), PMCC, mixed

Reducer/Clean Up:
 Below 80°F (27°C): Polane Reducer K69 or R7K111
 Above 80°F (27°C): Reducer #58 or R6K32

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
- Chemical processing equipment
- Marine & Offshore Applications
- Resists film attack by mildew (MR White only)
- Suitable for use in USDA inspected facilities
- Acceptable for use in Canadian Food Processing facilities categories: D1, D3 (Confirm acceptance of specific part numbers/rexes with your SW Sales Representative)
- Conforms to AWWA D102 OCS #5 & #6.
- Acceptable for use in high performance architectural applications
- Over FIRETEX hydrocarbon systems

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

1 ct. Recoatable Epoxy Primer @ 4.0 mils (100 microns) dft

1 ct. Hi-Solids Polyurethane Gloss @ 3.0 mils (75 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	87.1 mg loss
Adhesion	ASTM D4541	1050 psi
Corrosion Weathering¹	ASTM D5894, 21 cycles, 7056 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
Direct Impact Resistance	ASTM D2794	32 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 Resistance¹	ASTM B117, 9000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
Surface Burning	ASTM E84	Flame Spread Index 0; Smoke Development Index 0 (at 3.5 mils or 88 microns)
Thermal Shock	ASTM D2246, 15 cycles	Excellent

Meets the requirements of SSPC Paint No. 36, Level 3 for white and light colors. Dark colors may require a clear coat.

Footnotes:

¹ Primer: Zinc Clad II Plus; Intermediate - Recoatable Epoxy Primer



Protective & Marine Coatings

HI-SOLIDS POLYURETHANE

PART S B65-300 GLOSS SERIES
PART S B65-350 SEMI-GLOSS SERIES
PART S B65WW305 MR, WHITE TINT BASE (GLOSS)
PART T B60V30 HARDENER

Revised: November 5, 2020

PRODUCT INFORMATION

5.21

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Steel: Epoxy Primer			
1 ct.	Recoatable Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	Hi-Solids Polyurethane	3.0-5.0	(75-125)
Steel: Epoxy Primer			
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)
1-2 cts.	Hi-Solids Polyurethane	3.0-5.0	(75-125)
Steel: Zinc Rich Primer			
1 ct.	Zinc Clad II Plus	2.0-4.0	(50-100)
1 ct.	Macropoxy 646	5.0-10.0	(125-250)
1-2 cts.	Hi-Solids Polyurethane	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	3.0-5.0	(75-125)
Steel: Universal Primer			
1 ct.	Kem Bond HS Metal	2.0-5.0	(50-125)
1-2 cts.	Hi-Solids Polyurethane	3.0-5.0	(75-125)
Steel: Zinc Rich Primer			
1 ct.	Zinc Clad DOT	2.0-4.0	(50-100)
1 ct.	Steel Spec Epoxy Intermediate	3.0-6.0	(75-150)
1 ct.	Hi-Solids Polyurethane	3.0-5.0	(75-125)
Aluminum:			
1 ct.	DTM Wash Primer	0.7-1.3	(18-32)
1-2 cts.	Hi-Solids Polyurethane	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	3.0-5.0	(75-125)
Galvanized Metal:			
1 ct.	Recoatable Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	Hi-Solids Polyurethane	3.0-5.0	(75-125)
FIRETEX ONLY:			
Finish Coat for FIRETEX Hydrocarbon Systems:			
1 ct.	Hi-Solids Polyurethane*		
*Consult FIRETEX PFP Specialist for recommended dft range			

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, or ICRI No. 310.2R, CSP 1-3

* Primer Required

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	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted D St 3	D St 3	SP 3	-

TINTING

Tint with Maxitoner Colorants only into Part S. Extra White tints at 200% tint strength. Ultradeep tints at 150% tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

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 (15.1L) kits
Part T: quarts (0.94L) and gallons (3.78L)

Weight: 10.7 ± 0.2 lb/gal ; 1.28 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.



Protective & Marine Coatings

HI-SOLIDS POLYURETHANE

PART S B65-300 GLOSS SERIES
PART S B65-350 SEMI-GLOSS SERIES
PART S B65WW305 MR, WHITE TINT BASE (GLOSS)
PART T B60V30 HARDENER

Revised: November 5, 2020

APPLICATION BULLETIN

5.21

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

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. Primer required.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3. 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 Steel-Seam FT910. Primer required.

Follow the standard methods listed below when applicable:

ASTM D4258 Standard Practice for Cleaning Concrete.
 ASTM D4259 Standard Practice for Abrading Concrete.
 ASTM D4260 Standard Practice for Etching Concrete.
 ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
 SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
 ICRI No. 310.2R Concrete Surface Preparation.

Surface Preparation Standards

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

Below 80°F (27°C).....Polane Reducer K69 or R7K111
 Above 80°F (27°C).....Reducer #58 or R6K32

Airless Spray

Pressure.....2500 - 2800 psi
 Hose.....3/8" ID
 Tip.....013" - .017"
 Filter.....none
 Reduction.....As needed up to 10% by volume with R7K111, or up to 6% by volume with Polane Reducer K69, Reducer #58, or R6K32 - reducing more than these levels may result in VOC exceeding 340 g/L

Conventional Spray

Gun.....Binks 95
 Fluid Nozzle.....63 B
 Atomization Pressure50 - 70 psi
 Fluid Pressure.....20 - 25 psi
 Reduction.....As needed up to 15% by volume*

Brush

Brush.....Natural bristle
 Reduction.....As needed up to 15% by volume*

Roller

Cover3/8" woven with solvent resistant core
 Reduction.....As needed up to 15% by volume*

*As needed up to 15% by volume with R7K111, or up to 6% by volume with Polane Reducer K69, Reducer #58, or R6K32 - reducing more than these levels may result in VOC exceeding 340 g/L

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



Protective & Marine Coatings

HI-SOLIDS POLYURETHANE

PART S	B65-300	GLOSS SERIES
PART S	B65-350	SEMI-GLOSS SERIES
PART S	B65WW305	MR, WHITE TINT BASE (GLOSS)
PART T	B60V30	HARDENER

Revised: November 5, 2020

APPLICATION BULLETIN

5.21

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 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)	8.0 (200)
Dry mils (microns)	3.0 (75)	5.0 (125)
~Coverage sq ft/gal (m ² /L)	208 (5.1)	347 (8.5)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1040 (25.5)	

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

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 Reducer #58. Clean tools immediately after use with Reducer #58. Follow manufacturer's safety recommendations when using any solvent.

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.

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 Reducer #58.

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

Quick-Thane Urethane Accelerator is acceptable for use. See data page 5.97 for details.

E-Z Roll Urethane Defoamer is acceptable for use. See data page 5.99 for details.

R7K69 reducer is acceptable at temperature both above and below 80°F (28°C).

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

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.