

Exterior Finishes

Stucco

First Coat: B66W01151 - Pro Industrial DTM Acrylic Semi-Gloss Extra White

Second Coat: B66W01151 - Pro Industrial DTM Acrylic Semi-Gloss Extra White

Steel/Ferrous Metal

Spot Prime: B50WZ0001 - Kem Kromik® Universal Metal Primer Off White **First**

Coat: B66W01151 - Pro Industrial DTM Acrylic Semi-Gloss Extra White **Second**

Coat: B66W01151 - Pro Industrial DTM Acrylic Semi-Gloss Extra White



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 alkyd 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

113.07

DTM

ACRYLIC SEMI-GLOSS



PRO

INDUSTRIAL™



B66W01151 Extra White
 B66W01153 Deep Base
 B66T01154 Ultradeep
 B66R01158 Real Red
 B66Y01157 Vivid Yellow
 B66BW1211 Black

As of 03/05/2019, Complies with:			
OTC	Yes	LEED® 09 NC, CI	Yes
OTC Phase II	Yes	LEED® 09 CS	Yes
SCAQMD	Yes	LEED® 09 H&S	Yes
CARB	Yes	LEED®v4 & v4.1 Emissions	Yes
CARB SCM 2007	Yes	LEED®v4 & v4.1 VOC	Yes
Canada	Yes	MPI	Yes

CHARACTERISTICS

Pro Industrial DTM Acrylic coating is an interior/exterior, water based, corrosion resistant acrylic coating for light to moderate industrial use. Designed for new construction or maintenance use and can be used directly over prepared substrates.

- Chemical resistant
- Corrosion resistant
- Fast dry
- Flash rust/early rust resistant
- Suitable for use in USDA inspected facilities

Color: most colors

Recommended Spread Rate per coat:

Wet mils: 6.0 - 10.0

Dry mils: 2.4 - 4.0

Coverage: 160 - 267 sq ft/gal
approximate

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

Drying Time @ 6.0 mils wet 50% RH:

@ 50°F @ 77°F @ 110°F

To touch: 1 hr 20 min 10 min

Tack free: 2 hrs 45 min 30 min

To recoat: 2 hrs 1 hr 1 hr

Drying time is temperature, humidity, and film thickness dependent.

Finish: 38-48 @ 60° **Semi-Gloss**

Tinting with CCE:

Base oz/gal Strength

Extra White 0-6 Shercolor

Deep Base 6-12 Shercolor

Ultradeep 10-12 Shercolor

Real Red 0-12 Shercolor

Vivid Yellow 0-14 Shercolor

Extra White B66W01151

(may vary by color)

VOC (less exempt solvents): Unreduced:

<50 g/L; 0.42 lb/gal As per 40 CFR 59.406

Volume Solids: 40 ± 2%

Weight Solids: 51 ± 2%

Weight per Gallon: 10.21 lb/gal ±2%

Flash Point: N.A.

Shelf Life: 36 months, unopened

Store indoors at 40°F to 100°F.

RECOMMENDED SYSTEMS

Steel*:

2 cts. Pro Industrial DTM Acrylic

Steel: Acrylic Primer

1 ct. Pro Industrial Pro-Cryl Primer

or Pro Industrial DTM Primer/Finish

1-2 cts. Pro Industrial DTM Acrylic

Steel: Zinc primer Atmospheric

1 ct. Zinc Clad DOT

or Zinc Clad III HS

2 cts. Pro Industrial DTM Acrylic

Aluminum:

1-2 cts. Pro Industrial DTM Acrylic

Concrete Block:

1 ct. Pro Industrial Heavy Duty Blockfiller

1-2 cts. Pro Industrial DTM Acrylic

Concrete/Masonry:

1 ct. Loxon Concrete & Masonry Primer

1-2 cts. Pro Industrial DTM Acrylic

Drywall

1 ct. ProMar 200 Zero VOC Primer

1-2 cts. Pro Industrial DTM Acrylic

Galvanizing:

2 cts. Pro Industrial DTM Acrylic

Prefinished Siding:(Baked-on finishes)

1 ct. DTM Bonding Primer

1-2 cts. Pro Industrial DTM Acrylic

Wood, Exterior:

1 ct. Exterior Wood Primer

1-2 cts. Pro Industrial DTM Acrylic

Wood, Interior:

1 ct. Premium Wall & Wood Primer

1-2 cts. Pro Industrial DTM Acrylic

*Safety colors, DeepBase and Ultradeep colors require a prime coat for maximum durability, adhesion, and corrosion protection. Application of coating on unprimed bare steel may cause pinpoint rusting.

System Tested: (unless otherwise indicated)

Substrate: Steel

Surface Preparation: SSPC-SP10

Finish: Pro Industrial DTM Acrylic, B66W01151 – 2 cts @ 3.0 mils dft/ct

Adhesion:

Method: ASTM D4541

Result: > 500 psi

Abrasion Resistance¹:

Method: ASTM D4060, CS17 1000 cycles,

1kg

Result: 9.05 mg Loss

Corrosion Weathering:

Method: ASTM D5894, 10 cycles

Result: Rating 10, per ASTM D714 for

blistering

Rating 9, per ASTM D1654 for

corrosion

Direct Impact Resistance:

Method: ASTM D2794

Result: ≥ 176 in. lb

Dry Heat Resistance:

Method: ASTM D2485

Result: 300°F

Flexibility:

Method: ASTM D522, 180° bend,

1/8" mandrel

Result: Pass

Humidity Resistance:

Method: ASTM D4585, 1156 hours

Result: Rating 10 per ASTM D714 for

blistering

Rating 10 per ASTM D1654 for

corrosion

Pencil Hardness:

Method: ASTM D3363

Result: 2H, 30 day air dry

Salt Fog Resistance:

Method: ASTM B117, 240 hours

Result: Rating 10 per ASTM D714 for

blistering

Rating 7.5 per ASTM D1654 for

corrosion

¹ 2 coats 6 mil wft (7 day cure)

Provides performance comparable to products formulated In Lieu of federal specification: AA50570, and Paint Specification: SSPC-Paint 24



SURFACE PREPARATION

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.

Do not use hydrocarbon solvents for cleaning.

Iron & Steel - Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6. Primer recommended for best performance.

Aluminum - Remove all oil, grease, dirt, oxide and other foreign material per SSPC-SP1.

Galvanizing - Allow to weather a minimum of six months prior to coating. Solvent Clean 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-SP16 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 or ICRI 03732, CSP 1-3. Surfaces should be thoroughly cleaned and dry. Surface temperatures must be at least 55°F before filling. If required for a smoother finish, use the recommended filler/surfacer. The filler/surfacer must be thoroughly dry before topcoating per manufacturer's recommendations. 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. Apply one coat Loxon Conditioner, following label recommendations.

Wood - Surface must be clean, dry and sound. Prime with recommended primer. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped, sanded and spot primed before full coat of primer is applied. All nail holes or small openings must be properly caulked.

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, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

Zinc Primers - Refer to the zinc technical data sheet application procedures and performance tips prior to topcoating.

APPLICATION PROCEDURES

Apply paint at the recommended film thickness and spreading rate as indicated on front page. Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

SAFETY PRECAUTIONS

Before using, carefully read **CAUTIONS** on label.
 Refer to the SDS sheets before use. **FOR PROFESSIONAL USE ONLY.**
 Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

APPLICATION

Refer to the SDS before using

Temperature: 50°F minimum
 110°F maximum
 (Air, surface, and material)
 At least 5°F above dew point

Relative humidity: 85% maximum

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 compatible with the existing environmental and application conditions.

Airless Spray

Pressure..... 1500 psi
 Hose..... 1/4" ID
 Tip017" - .021"
 Filter..... 60 mesh
 Reduction..... Not recommended

Conventional Spray

Gun Binks 95
 Fluid Nozzle 66
 Air Nozzle..... 63PB
 Atomization Pressure..... 50 PSI
 Fluid Pressure..... 10-20 PSI
 Reduction..... Not recommended

Brush Nylon / polyester
 Reduction..... Not recommended
 Due to this product's fast dry performance, brushing should be limited to small areas where a wet edge can be maintained

Roller 1/4-3/8" woven
 Reduction..... Not recommended

If specific application equipment is listed above, equivalent equipment may be substituted.

CLEANUP INFORMATION

Clean spills and spatters immediately with soap and warm water. Clean hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.

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 KOR, SP, FRC



KEM KROMIK[®] UNIVERSAL METAL PRIMER

B50NZ0006 BROWN
B50WZ0001 OFF WHITE
B50AZ0006 GRAY

As of 01/16/2018, Complies with:			
OTC	No	LEED [®] 09 NC, CI	No
OTC Phase II	No	LEED [®] 09 CS	No
SCAQMD	No	LEED [®] 09 S	No
CARB	No	LEED [®] v4 Emissions	No
CARB SCM 2007	No	LEED [®] v4 VOC	No
Canada	No	MPI	Yes

CHARACTERISTICS

KEM KROMIK UNIVERSAL METAL PRIMER is a rust inhibiting, modified phenolic alkyd resin primer designed for use over iron and steel substrates. Can be used as a universal primer under high performance topcoats. Suitable as a barrier coat over conventional coatings which would normally be attacked by strong solvents in high performance coatings.

Features:

- High film build to protect sand blasted steel
- Corrosion resistant
- Universal, can be topcoated with epoxies and urethanes
- Exterior/interior metal primer
- Suitable for use in USDA inspected facilities

For use on properly prepared:

- Steel

Recommended for use in:

- Shopcoat primer
- Maintenance primer
- Structural steel
- Machinery
- Marine vessels
- Barrier coating
- Hand rail
- Storage tanks
- Bar joists
- Steel pipe

Tinting: **DO NOT TINT**

Shelf Life: 36 months, unopened

Finish: Flat

White B50WZ0001

(may vary by base)

VOC(less exempt solvents) 389 g/L - 3.24 lb/gal
(as per 40 CFR 59.406 and SOR/2009-264, s. 12)

Volume Solids: 55 ± 2%

Weight Solids: 75 ± 2%

Weight per Gallon: 12.86 lb/gal ± .2 lb

Flash Point: 80°F PMCC

Brown B50NZ0006

(may vary by base)

VOC(less exempt solvents) 409 g/L - 3.24 lb/gal
(as per 40 CFR 59.406 and SOR/2009-264, s. 12)

Volume Solids: 53 ± 2%

Weight Solids: 73 ± 2%

Weight per Gallon: 12.62 lb/gal ± .2 lb

Flash Point: 80°F PMCC

SPECIFICATIONS

Color: White, Brown & Gray

Recommended Spread Rate per coat: White B50WZ0001 (varies by base)

wet mils: 6.0 - 8.0

dry mils: 3.3 - 4.4

coverage: 267- 200 sq ft/gal approximate

Theoretical coverage: 882 sq ft/gal @ 1 mil dry

Drying Schedule @ 6.0 mils wet, 50% RH:

	@ 40°F/4.5°C	@ 77°F/25°C	@ 110°F/43°C
To touch:	2 hours	30 minutes	15 minutes
Tack handle:	2.5 hours	1 hour	20 minutes
To recoat: with itself & alkyds	2.5 hours	1 hour	45 minutes
To recoat:*	36 hours	16 hours	16 hours
To cure:	7 days	7 days	7 days

* Recoat with hot solvents or high performance coatings. For maximum adhesion, acrylic topcoats require 48 - 72 hours drying of primer. Drying and recoat times are temperature, humidity, and film thickness dependent.

RECOMMENDED SYSTEMS

Steel:	Pro Industrial Waterbased Alkyd-Urethane
1ct. Kem Kromik Universal Primer	Pro Industrial Multi-Surface Acrylic
1-2 cts. Topcoat Acceptable	Pro Industrial Pre-Catalyzed Epoxy & Urethane
Topcoats: Acrolon 218 HS	Pro Industrial Urethane Alkyd Enamel
Polyurethane Hi-Solids	Pro Industrial Waterbased Acrolon 100
Polyurethane Industrial Enamel	Sher-Cryl
Macropoxy HS Epoxy	Silver-Brite Aluminum
Metalatex Semi-Gloss Enamel	Steel Master 9500
Pro Industrial Acrylic	Tile-Clad HS Epoxy
Pro Industrial DTM Acrylic	
Pro Industrial Waterbased Epoxy	

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

System: (unless otherwise indicated)

Substrate: Steel

Surface Preparation: SSPC-SP6/NACE 3

Primer: 1ct. Kem Kromik Universal Metal Primer, @ 3.0 - 4.4 mils dft/ct.

Adhesion¹:

Method: ASTM D3359

Result: 4B **Corrosion**

Resistance¹: Method:

ASTM D5894, 1008

Result: Pass

Dry Heat Resistance:

Method: ASTM D2485

Result: 200°F

Flexibility¹:

Method: ASTM D522,

1/4" mandrel

Result: Pass

Fineness of grind²:

Method: Hegman

Result: 4 Hegman minimum

Sag Test²:

Method: ASTM D4400

Result: 12 mils minimum

Viscosity²: 84-94 KU

Water Resistance¹:

Result: Pass

¹ 1ct. Kem Kromik Primer 4.5-5 WFT² Standard test based on Certificate of Analysis



KEM KROMIK® UNIVERSAL METAL PRIMER

SURFACE PREPARATION

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.

Iron & Steel- Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). Prime any bare steel within 8 hours or before flash rusting occurs.

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, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system. Other substrates may or may not be appropriate. If a specific substrate is not listed above, consult your Sherwin-Williams representative for more information.

As a "Barrier" Coat - If it is necessary to topcoat a previously painted surface with chemically resistant or strong solvent topcoats, Kem Kromik Universal Metal Primer can be used as a barrier coat to help reduce lifting. Apply a coat of Kem Kromik Universal Metal Primer to a small area to test for adhesion or bleeding. If there is evidence of either poor adhesion or bleeding, clean surface to bare steel and apply recommended system.

APPLICATION PROCEDURES

Apply paint at the recommended film thickness and spreading rate as indicated on front page. Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance. 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, over thinning, climatic conditions, and excessive film build.

SAFETY PRECAUTIONS

Refer to the SDS sheets before use. **FOR PROFESSIONAL USE ONLY**
Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

PERFORMANCE TIPS

Mix paint thoroughly to a uniform consistency with slow speed power agitation prior to use. Stripe coat 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. Not recommended for immersion service or exposure to acids, alkalis, or strong solvents. Intimate contact with the steel surface and primer is necessary for adequate rust inhibition and adhesion. For maximum adhesion, acrylic topcoats require 48 - 72 hours drying of primer.

APPLICATION

Refer to the SDS sheet before use **Temperature:**
40°F(4.5°C) minimum
120°F(49°C) maximum
(Air, surface, and material)
At least 5°F above dew point
Relative humidity: 85% maximum

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 compatible with the existing environmental and application conditions.

Reducer Not recommended
Clean Up.....Xylene,R2K4

Airless Spray

Pressure1800-3000 psi
Hose1/4" ID
Tip015-.019"
Filter60 mesh

Conventional Spray

Gun.....Binks 95
Fluid Nozzle..... 63C
Air Nozzle.....63PB
Atomization Pressure50 PSI
Fluid Pressure15-20 PSI

Brush Natural Bristle

Roll.... 3/8" woven with solvent resistant core

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

CLEANUP INFORMATION

Clean spills, splatters & tools with compliant cleanup solvent. After cleaning, flush spray equipment with compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.

DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

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