Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

Revised: March 25, 2022

PRODUCT INFORMATION

5.10

PRODUCT DESCRIPTION

COROTHANE I MIO-ALUMINUM is a single component, moisture curing, aluminum and Micaceous Iron Oxide (MIO) filled urethane primer, intermediate coating, or a finish coat.

- Excellent adhesion to most substrates
- Low temperature application - down to 20°F (-7°C)
- Excellent exterior durability
- Outstanding abrasion resistance
- Excellent corrosion and chemical resistance
- Recoat up to 30 days
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Matte
Color:	Aluminum
Volume Solids:	65% ± 2%
Weight Solids:	77% ± 2%
VOC (calculated):	<340 g/L; 2.8 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**3.0** (75)	**4.5** (112)
Dry mils (microns)	**2.0** (50)	**3.0** (75)
~Coverage sq ft/gal (m^2/L)	**348** (8.5)	**521** (12.8)
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 @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2 hours	1 hour
To recoat:			
minimum:	16 hours	7 hours	3 hours
maximum:	30 days	30 days	30 days
To cure:	5 days	3 days	1 day

Abrade surface if maximum recoat time is exceeded.
Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	103°F (39°C), PMCC
Reducer*/Clean Up:	VOC Restricted Areas (<340 g/L): R7K111

*Other areas (<420 g/L): Brush and Roll: Reducer #15, R7K15. Spray: Reducer #100, R7K100. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

RECOMMENDED USES

- For use over prepared surfaces in industrial environments
- Heavy Duty interior and exterior structural coating
- High performance, one coat or multiple coat, coating for steel, aluminum, concrete, and most plastics in industrial and marine environments
- Universal primer for poorly prepared surfaces, old paint, tightly adherent rust, weathered galvanized steel, and concrete
- Excellent intermediate coat providing superior adhesion of subsequent coats
- Enhanced film strength and edge protection with aluminum and micaceous iron oxide addition
- Meets requirements of SSPC Paint Spec No. 41

PERFORMANCE CHARACTERISTICS

Substrate*: Steel
Surface Preparation*: SSPC-SP6/NACE 3
System Tested*:
1 ct: Corothane I Aluminum @ 3.0 mils (75 microns) dft
1 ct: Corothane I Iron Ox B @ 4.0 mils (100 microns) dft
1 ct: Corothane I Alphatic @ 3.0 mils (75 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Adhesion	ASTM D4541	1000 psi
Corrosion Weathering (Zinc Primer/ Mastic/Aliphatic Finish)	ASTM D5894, 1700 hours, 5 cycles	Rating 9 per ASTM D610 for rusting; Rating 9 per ASTM D714 for blistering
Direct Impact Resistance	ASTM D2794	140 in. lb.
Dry Heat Resistance	ASTM D2485	300°F (149°C)
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 300 hours	Passes
Pencil Hardness	ASTM D3363	2B
Salt Fog Resistance (Zinc Primer/ Mastic/Aliphatic)	ASTM B117, 2300 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering

continued on back

Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

Revised: March 25, 2022

PRODUCT INFORMATION

5.10

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel:			
1 ct.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
1 ct.	Corothane I Iron Ox B	3.0-5.0	(75-125)
1 ct.	Corothane I Aliphatic Finish Coat	2.0-3.0	(50-75)
or	Corothane I HS	2.0-3.0	(50-75)
or	Corothane I Iron Oxide A HS	2.5-3.5	(63-88)
Steel: (Zinc Primer)			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Concrete: Smooth			
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Concrete: Rough			
1 ct.	Kem Cati-Coat HS Epoxy Filler/Sealer	10.0-30.0	(250-750)
as required to fill voids and provide a continuous substrate.			
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Galvanized:			
1-2 cts.	Corothane I MIO-Aluminum (Check Compatibility)	2.0-3.0	(50-75)
Aluminum:			
1-2 cts.	Corothane I MIO-Aluminum (Check Compatibility)	2.0-3.0	(50-75)
Previously Painted Steel:			
Spot prime bare steel with 1 coat of Corothane I MIO-Zinc Primer			
1 ct.	Corothane I Iron Ox B	3.0-5.0	(75-125)
1 ct.	Corothane I Aliphatic Finish Coat	2.0-3.0	(50-75)

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

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-SP2/3
Concrete:	SSPC-SP13/NACE 6, or ICRI No. 310.2R , CSP 1-3
Galvanized:	SSPC SP-1
Aluminum:	SSPC-SP-1
Previously Painted:	SSP-SP2 or SP-3

Surface Preparation Standards

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

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	
air and surface:	20°F (-7°C) minimum, 100°F (38°C) maximum
material:	45°F (7°C) minimum Do not apply over surface ice
Relative humidity:	30% minimum, 99% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	1 gallon (3.78L) and 5 gallon (18.9L) containers
Weight:	10.05 ± 0.2 lb/gal ; 1.26 Kg/L

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.

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.

Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

Revised: March 25, 2022

APPLICATION BULLETIN

5.10

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 Hand/Power Tool per SSPC-SP2/3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Coat any bare steel the same day as it is cleaned or before flash rusting occurs.

Aluminum
Remove all oil, grease, dirt, oxide and other forgeign material by Solvent Cleaning per SSPC-SP1.

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 por, brush blasting per SSPC-SP7 is necessay 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 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.

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.

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

Surface Preparation Standards

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

APPLICATION CONDITIONS

Temperature:	
air and surface:	20°F (-7°C) minimum, 100°F (38°C) maximum
material:	45°F (7°C) minimum Do not apply over surface ice
Relative humidity:	30% minimum, 99% 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 .....VOC Restricted Areas (<340 g/L): R7K111

*Other areas (<420 g/L): Spray: Reducer #15, R7K15. Brush and Roll: Reducer #100, R7K100. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

Airless Spray
Pump.....30:1
Pressure.....1800-2000 psi
Hose.....1/4" ID
Tip .....015" - .019"
Filter .....60 mesh
Reduction.....As needed up to 10% by volume

Conventional Spray

Unit.....	Graco	Binks
Gun	900	95
Fluid Nozzle	070	66/65
Air Nozzle.....	947	66PR
Atomization Pressure.....	60-70 psi	60-70 psi
Fluid Pressure.....	15-20 psi	15-20 psi
Reduction.....	As needed up to 10% by volume	

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

Roller
Cover .....1/4" natural or synthetic with solvent resistant core
Reduction.....As needed up to 10% by volume

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

continued on back

Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

Revised: March 25, 2022

APPLICATION BULLETIN

5.10

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix thoroughly prior to use with a low speed power agitator. Filter slowly through a 55 mesh screen.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**3.0** (75)	**4.5** (112)
Dry mils (microns)	**2.0** (50)	**3.0** (75)
~Coverage sq ft/gal (m^2/L)	**348** (8.5)	**521** (12.8)
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 @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2 hours	1 hour
To recoat:			
minimum:	16 hours	7 hours	3 hours
maximum:	30 days	30 days	30 days
To cure:	5 days	3 days	1 day

Abrade surface if maximum recoat time is exceeded.
Drying time is temperature, humidity, and film thickness dependent.

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. 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.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or gelling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Corothane KA Accelerator is acceptable for use. See its data page for details.

It is recommended that partially used cans not be sealed/closed for use at a later date.

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.