Protective & Marine Coatings

COROTHANE® I IRONOX® A HS

GRAY **B65A55**

Revised June 30, 2014

PRODUCT INFORMATION

5.13

PRODUCT DESCRIPTION

COROTHANE I IRONOX A HS is a single component, low VOC, moisture curing urethane finish coat with micaceous iron oxide. Designed for low temperature or high humidity applications, providing UV resistance and chemical resistance equivalent to two part urethane coatings.

- Low temperature application - down to 20°F (-7°C)
- Excellent resistance to yellowing, chalking, or degradation by sunlight
- Excellent adhesion to most surfaces
- Superior chemical and abrasion resistance
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Low Gloss
Color:	Gray
Volume Solids:	64% ± 2%
Weight Solids:	82 % ± 2%
VOC (calculated):	<340 g/L; 2.80 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.0** (100)	**5.5** (13.8)
Dry mils (microns)	**2.5** (63)	**3.5** (88)
~Coverage sq ft/gal (m^2/L)	**293** (7.2)	**410** (10.0)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1024** (25.1)	

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):

	@ 20°F/-7°C	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	6 hours	4 hours	1 hour	20 minutes
To recoat:	48 hours	24 hours	4 hours	1 hour
To cure:	10 days	7 days	3 days	3 days

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:	101°F (39°C), PMCC
Reducer:	Reducer #15, R7K15 or Reducer R7K65
Clean Up:	Reducer #15, R7K15

RECOMMENDED USES

- Color topcoat for previously painted surfaces where maximum color retention and chemical resistance are required
- Chemical resistant coating for metallized surfaces, structural steel, and tanks
- Superior coverage on edges and bridging over hairline cracks due to micaceous iron oxide
- Recommended topcoat for lead overcoat system
- Suitable for use in USDA inspected facilities

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP5/NACE 1

System Tested*:

1 ct. Corothane I GalvaPac Zinc Primer @ 3.0 mils (75 microns) dft
1 ct. Corothane I IronOx A HS @ 3.0 mils (75 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1kg load	160 mg loss
Adhesion	ASTM D4541	800 psi
Corrosion Weathering (with Ironox B as Intermediate)	ASTM D5894, 15 cycles, 5000 hrs	Rating 10 per ASTM D610 for Rusting (field); Rating 9 per ASTM D714 for Blistering
Direct Impact Resistance	ASTM D2794	60 in. lbs.
Dry Heat Resistance	ASTM D2485	280°F (138°C)
Flexibility	ASTM D522, 180° bend, 3/16" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 1000 hours	No rust, delamination or creepage at scribe
Pencil Hardness	ASTM D3363	3H
Salt Fog Resistance (with Ironox B as Intermediate)	ASTM B117, 5000 hours	Rating 10 per ASTM D610 for Rusting (field); Rating 8 per ASTM D714 for Blistering

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel:			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
1-2 cts.	Corothane I IronOx A HS	2.5-3.5	(63-88)
Steel:			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
1 ct.	Corothane I Iron Ox B	3.0-5.0	(75-125)
1 ct.	Corothane I IronOx A HS	2.5-3.5	(63-88)
Steel:			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
1 ct.	Corothane I Iron Ox B	3.0-5.0	(75-125)
1 ct.	Corothane I IronOx A HS	2.5-3.5	(63-88)
Steel:			
1 ct.	Corothane I PrePrime	1.5-2.0	(40-50)
1 ct.	Corothane I Iron Ox B	3.0-5.0	(75-125)
1 ct.	Corothane I IronOx A HS	2.5-3.5	(63-88)
Concrete, smooth:			
1 ct.	Corothane I PrePrime	1.5-2.0	(40-50)
1 ct.	Corothane I IronOx A HS	2.5-3.5	(63-88)
Previously Painted Surfaces:			
Spot prime bare steel with 1 coat of Corothane I GalvaPac Zinc Primer			
2 cts.	Corothane I IronOx A HS	2.5-3.5	(63-88)
or			
1 ct.	Corothane I Iron Ox B	3.0-5.0	(75-125)
1 ct.	Corothane I IronOx A HS	2.5-3.5	(63-88)
(Check compatibility)			

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-SP6
Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3
* Previously Painted: Clean, dry, sound
* 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	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	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: 13.94 ± 0.2 lb/gal ; 1.67 Kg/L depending on color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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

WARRANTY

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

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.

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APPLICATION BULLETIN

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SURFACE PREPARATIONS

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

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

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

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 .....Reducer #15, R7K15 or Reducer R7K65
Clean Up .....Reducer #15, R7K15

Airless Spray
Pump.....30:1
Pressure.....1800 - 2000 psi
Hose.....1/4" ID
Tip .....011" - .015"
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.

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix paint 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)	**4.0** (100)	**5.5** (13.8)
Dry mils (microns)	**2.5** (63)	**3.5** (88)
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Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1024** (25.1)	

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):

	@ 20°F/-7°C	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	6 hours	4 hours	1 hour	20 minutes
To recoat:	48 hours	24 hours	4 hours	1 hour
To cure:	10 days	7 days	3 days	3 days

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.

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PERFORMANCE TIPS

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

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

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

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

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.

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

Corothane KA Accelerator is acceptable for use. See data page 5.98 for details.

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

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