



Protective & Marine Coatings

COROTHANE® I COAL TAR

B65B11

Revised Sept. 02, 2015

PRODUCT INFORMATION

5.06

PRODUCT DESCRIPTION

COROTHANE I - COAL TAR is a single component, moisture curing urethane with micaceous iron oxide designed for low temperature and immersion application. It is high solids and <340 g/L VOC.

- Low temperature application - down to 20°F (-7°C)
- Can be immersed after 4 hours cure at 77°F (25°C)
- Superior to coal tar epoxy for flexibility, weathering, corrosion resistance, heat resistance, and impact resistance
- Contains micaceous iron oxide
- Enhanced coating strength and edge protection with micaceous iron oxide addition

PRODUCT CHARACTERISTICS

Finish:	Low Gloss
Color:	Black
Volume Solids:	64% ± 2%
VOC (calculated):	<340 g/L; 2.8 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	8.0 (200)	11.0 (275)
Dry mils (microns)	5.0 (125)	7.0 (175)
~Coverage sq ft/gal (m²/L)	151 (3.7)	211 (5.2)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1056 (25.8)	

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

Drying Schedule @ 8.0 mils wet (200 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	4 hours	1 hour	20 minutes
To recoat:			
minimum:	18 hours	4 hours	2 hours
maximum:	3 days	3 days	3 days
To cure (85%)*:	4 days	3 days	3 days
To immerse:	24 hours	4 hours**	1 hour

*This product will continue to cure for up to 6 months.

**4 oz/gal of Corothane I KA Accelerator required.

If maximum recoat time is exceeded, abrade surface before recoating. 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:	>90°F (32°C), PMCC
Reducer/Clean Up:	Reducer #100, R7K100

RECOMMENDED USES

- Coating for steel or concrete which is immersed or exposed to splash zones, high humidity, sewage, or buried environments
- For application during cold and/ or damp conditions limiting the use of typical epoxies and urethanes
- As a substitute for coal tar epoxy
- Meets requirements of SSPC Paint Spec No. 41

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

1 ct. Corothane I Coal Tar @ 6.0 mils (150 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	123 mg loss
Adhesion	ASTM D4541	800 psi
Corrosion Weathering (Zinc Primer/Coal Tar)	ASTM D5894, 3024 hours, 9 cycles	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
Direct Impact Resistance	ASTM D2794	80 in. lbs.
Dry Heat Resistance	ASTM D2485	240°F (115°C)
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Moisture Condensation Resistance (Zinc Primer/Coal Tar)	ASTM D4585, 100°F (38°C), 1008 hours	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting
Pencil Hardness	ASTM D3363	HB
Salt Fog Resistance (Zinc Primer/Coal Tar)	ASTM B117, 2000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
Wet Heat Resistance	Non-immersion	185°F (85°C)



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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Steel, immersion service:		
2 cts. Corothane I Coal Tar	5.0-7.0	(125-175)
Steel, immersion service:		
1 ct. Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
2 cts. Corothane I Coal Tar	5.0-7.0	(125-175)
Steel, atmospheric service:		
1 ct. Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
2 cts. Corothane I Coal Tar	5.0-7.0	(125-175)
Concrete, smooth:		
2 cts. Corothane I Coal Tar	5.0-7.0	(125-175)

On previously painted concrete, spot prime bare areas with Corothane I Coal Tar reduced 10% with Reducer #15, R7K15. 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:		
Atmospheric:	SSPC-SP6/NACE 3, 2 mil (50 micron) profile	
Immersion:	SSPC-SP10/NACE 2, 2 mil (50 micron) profile	
Concrete:		
Atmospheric:	SSPC-SP13/NACE 6, or ICRI No. 310.2R CSP 1-3	
Immersion:	SSPC-SP13/NACE 6-4.3.1 or 4.3.2, or ICRI No. 310.2R, CSP 1-3	

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	C St 2	C St 2	SP 2	-
Rusted	D St 2	D 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	-

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, 85% maximum.

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	5 gallon (18.9L) containers
Weight:	12.65 +/- 0.2 lb/gal ; 1.6 Kg/L

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

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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 for atmospheric service is Commercial Blast Cleaning per SSPC-SP6/NACE3. Minimum surface preparation for immersion service is Near White 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 within 8 hours or before flash rusting occurs.

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.

Concrete, Immersion Service:

For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2R, CSP 1-3.

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 10	3
Brush-Off Blast	Sa 1	Sa 1	SP 10	4
Hand Tool Cleaning	OC St 2	OC St 2	SP 3	-
Rusted	OC St 2	OC St 2	SP 3	-
Pitted & Rusted	OC St 2	OC St 2	SP 3	-
Power Tool Cleaning	DC St 3	DC St 3	SP 3	-
Rusted	DC St 3	DC St 3	SP 3	-
Pitted & Rusted	DC St 3	DC 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, 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 Reducer #100, R7K100

Airless Spray

Pump.....30:1
Pressure.....1800 - 2000 psi
Hose.....1/4" ID
Tip0.017" - .021"
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 material 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)	8.0 (200)	11.0 (275)
Dry mils (microns)	5.0 (125)	7.0 (175)
~Coverage sq ft/gal (m ² /L)	151 (3.7)	211 (5.2)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1056 (25.8)	

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

Drying Schedule @ 8.0 mils wet (200 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	4 hours	1 hour	20 minutes
To recoat:			
minimum:	18 hours	4 hours	2 hours
maximum:	3 days	3 days	3 days
To cure (85%)*:	4 days	3 days	3 days
To immerse:	24 hours	4 hours**	1 hour

*This product will continue to cure for up to 6 months.

**4 oz/gal of Corothane I KA Accelerator required.

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

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #100, R7K100. Clean tools immediately after use with Reducer #100, R7K100. 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 #100, R7K100

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 recommended 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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