Protective & Marine Coatings

Certified to NSF/ANSI 61

POLY-COTE™ 115

PART A B65V115
PART B B65-115
B65-K115

ISOCYANATE SERIES
FIELD REPAIR KIT

Revised: November 29, 2017

PRODUCT INFORMATION

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PRODUCT DESCRIPTION

POLY-COTE 115 is a flexible two component polyurethane coating formulated to provide optimal build properties, good recoatability properties and aesthetic properties. The required coating thickness can be applied in one coat – even on seams, welds and rivets. It is a 100% solids, elastomeric, aromatic polyurethane formulated without solvents.

- Meets AWWA C222
- Meets USDA requirement for incidental contact
- Meets FDA 175.300 approval (blue and white only)
- NSF/ANSI 61 Approved (excluding blue)

PRODUCT CHARACTERISTICS

Color:	Beige, Gray, Black, and Blue
Finish:	Gloss
Volume Solids:	100% mixed
VOC:	No measurable VOC levels
Mix Ratio:	1A:3B by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**20.0** (500)	**>500*** (12,500)
Dry mils (microns)	**20.0** (500)	**>500*** (12,500)
~Coverage sq ft/gal** (m^2/L)	**3** (0.07)	**80** (1.96)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1600** (39.2)	

*250 mils (6250 microns) maximum for NSF applications, 26 mils (650 microns) maximum for FDA applications

**For Poly-Cote 115FR, approximate coverage is 30 sq ft/gal (0.74 m^2/L)

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

Drying Schedule:

	@ 45°F/7°C	@ 75°F/24°C	@ 105°F/41°C
Tack free:	6 hours	2 hours	1 hour
To recoat:	< 24 hours	< 24 hours	< 24 hours
To handle:	36 hours	12 hours	6 hours
Immersion*:	24 hours	12 hours	6 hours

*72 hours @ 75°F/24°C for NSF applications

If maximum recoat time is exceeded, abrade surface before recoating.

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

Pot life: 12-15 minutes @ 75°F/24°C

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)
Flash Point:	428°F (220°C)
Reducer:	Not recommended

RECOMMENDED USES

- Water Conveyance Piping
- Water & Wastewater Market
- Mining
- Rail
- Pulp & Paper Industry
- Transmission Poles

***Immersion Service - Potable Water:** Meets NSF Standard 61** - drinking water system components. Fittings: ≥ 2 in.; Pipe: ≥ 8 in.; Tank: ≥ 50 gallons; Valve: ≥ 2 in.

* Excluding blue
** See NSF website http://nsf.org for additional information

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	<100 mg loss
Adhesion	ASTM D4541; Annex A.4 (Test Method E)	>1500 psi
	ASTM D6677	Rating - 10
Cathodic Disbondment	ASTM G95, mtd A -1.5V, 30 days	<12 mm radius
Chemical Resistance	ASTM D543	10% H_2SO_4 <5% 30% NaCl <5% 30% NaOH <5% Diesel Fuel <5%
Dielectric Strength	ASTM D149	>250 V/mil
Elongation	ASTM D412	>40%
Flexibility (75 mils)	ASTM D522, 3" mandrel	No cracking or delamination
Hardness, Durometer	ASTM D2240	>65, Shore D
Impact Resistance	ASTM G14	>75 in-lbs
Service Temperature	Dry - Continuous: -40°F (-40°C) to 200°F (93°C) Maximum Surge: 350°F (177°C) Immersion - Insulated (max): 140°F (60°C) Non-Insulated: 120°F (49°C)	
Tensile Strength	ASTM D412	>2500 psi
Water Absorption	ASTM D570	<2%
Water Vapor Permeability	ASTM E96	0.09 inch-pounds @ 53 mils (1,325 microns)

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RECOMMENDED SYSTEMS

PRIMERS
Steel: Self-priming
Galvanized Steel: Self-priming
Ductile Iron Pipe: Self-priming

	Dry Film Thickness / ct. Mils	(Microns)
Steel- Immersion :AWWA C222		
1 ct Poly-Cote 115	20.0	(400)
Steel- Immersion :AWWA D102		
1 ct Poly-Cote 115	25.0	(625)
Galvanized, Immersion		
1 ct Poly-Cote 115	20.0	(400)
Ductile Iron, Immersion		
1 ct Poly-Cote 115	20.0	(400)
Field Repair, Immersion		
2 cts Poly-Cote 115	25.0/ct	(625)/coat

TOPCOATS
Approved aliphatic urethanes. Contact your Sherwin-Williams representative for more information.

ADVANTAGES

- Low permeability - improves life cycle performance and corrosion resistance.
- Chemical resistant - resistant to a broad spectrum of acidic and caustic chemicals
- Abrasion & Impact resistant - reduces the need for field touch-up caused by damage from handling, transporting, and installation; Increases life cycle due to reduced abrasion and impact from foreign materials.
- Excellent adhesion - exceeds 1,500 psi on properly prepared steel
- Good Flexibility - Prevents fractures in the film caused by flexing during transportation and installation
- High film build properties - achieve specified DFT's in a single coat even are sharp edges and angles
- Easily Maintained - Repairs can be completed quickly with the use of the Poly-Cote 115FR Field Repair Kit
- Extended recoatability - accommodates tie-ins, repairs, and low film build areas with a 24 hour recoat window.

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:
Steel:
Large parts/structures (>50 ft²): SSPC-SP10/NACE No. 2, minimum 3 mil (75 micron) angular profile
Small area (<50 ft²): SSPC-SP11

Ductile Iron Pipe:
Large parts/structures (>50 ft²): NAPF 500-03-04, minimum 3 mil (75 micron) angular profile
Small area (<50 ft²): NAPF 500-03-03

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	-

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.

APPLICATION CONDITIONS

Poly-Cote 115:
Temperature:

Part A:	80°F (27°C) minimum, 160°F (71°C) maximum
Part B:	120°F (49°C) minimum, 160°F (71°C) maximum
Hose:	120°F (49°C) minimum, 160°F (71°C) maximum
Air:	0°F (-18°C) minimum, 120°F (49°C) maximum
Surface:	40°F (4.5°C) minimum, 140°F (60°C) maximum at least 5°F (2.8°C) above dew point

Poly-Cote 115FR:
Temperature:

Part A and B:	60°F (16°C) minimum, 80°F (27°C) maximum
Air:	0°F (-18°C) minimum, 120°F (49°C) maximum
Surface:	40°F (4.5°C) minimum, 140°F (60°C) maximum at least 5°F (2.8°C) above dew point

Relative humidity: 95% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Poly-Cote 115:	50 gallons (189L) in a 55-gallon (208L) size drum and 250 gallons (945L) in a 250-gallon (945L) size tote.
Poly-Cote 115FR:	Two 0.5-gallon kits: two 1-gallon (3.78L) containers of Part B filled at 0.375 gallons (1.42L) each and two full-filled pint (0.125 gallons / .47L) containers of Part A ISO.

Weight:

Part A:	10.85 ± 0.2 lb/gal ; 1.30 Kg/L
Part B:	10.3 ± 0.15 lb/gal ; 1.23 Kg/L
Mixed:	10.7 ± 0.2 lb/gal ; 1.28 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.

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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. The substrate shall not contain soluble salt concentrations in excess of 3 ppm for chlorides, 5 ppm for nitrates, and 10 ppm for sulfates. Surface with soluble salt concentrations in excess of these values shall be cleaned until satisfactory results are obtained. Minimum surface preparation for large surfaces shall be Near White Metal Blast Cleaning per SSPC-SP10/NACE No. 2. Blast clean all surfaces using sharp, angular abrasive for optimum surface profile (3 mils or greater average, with no individual reading being less than 2.5 mils per NACE RP0287). Small surface areas (<50 sq. ft.) shall be Power Tool Cleaned To Bare metal per SSPC-SP11. Grind all surfaces utilizing mechanical scarification capable of producing the greatest surface profile and shall be performed in a perpendicular pattern to the direction of flow on the substrate. Remove all weld spatter, smooth all rough welds, and round all sharp edges by grinding prior to abrasive blasting.

Existing coating shall be feathered 1.5 in. to 3 in. when coating adjacent bare steel, such as girth welds. Prior to coating, the applicator will tape off, using duct tape, a line between feathered coating and the remaining non-blasted coating and ensure the edge of tape is on the roughened coating.

Cleaned surface shall be dry air blasted and either brushed off or vacuumed, in a manner to remove dust and debris prior to coating, and shall be coated before any rust blooming occurs. Any cleaned steel showing rust stains shall be re-prepared prior to coating.

Ductile Iron Pipe
Remove all oil and grease from surface by Solvent Cleaning per NAPF 500-03-01. The substrate shall not contain soluble salt concentrations in excess of 3 ppm for chlorides, 5 ppm for nitrates, and 10 ppm for sulfates. Surface with soluble salt concentrations in excess of these values shall be cleaned until satisfactory results are obtained. Minimum surface preparation for large surfaces shall be Abrasive Blast Cleaning for Ductile Iron Pipe per NAPF 500-03-04. Blast clean all surfaces using sharp, angular abrasive for optimum surface profile (3 mils / 75 microns or greater, with no individual reading being less than 2.5 mils / 63 microns per NACE RP0287). Small surface areas (<50 sq. ft.) shall be Power Tool Cleaned per NAPF 500-03-03. Grind all surfaces utilizing mechanical scarification capable of producing the greatest surface profile and shall be performed in a perpendicular pattern to the direction of flow on the substrate.

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

Poly-Cote 115:
Temperature:

Part A:	80°F (27°C) minimum, 160°F (71°C) maximum
Part B:	120°F (49°C) minimum, 160°F (71°C) maximum
Hose:	120°F (49°C) minimum, 160°F (71°C) maximum
Air:	0°F (-18°C) minimum, 120°F (49°C) maximum
Surface:	40°F (4.5°C) minimum, 140°F (60°C) maximum at least 5°F (2.8°C) above dew point

APPLICATION CONDITIONS (CONT'D)

Poly-Cote 115FR:
Temperature:

Part A and B:	60°F (16°C) minimum, 80°F (27°C) maximum
Air:	0°F (-18°C) minimum, 120°F (49°C) maximum
Surface:	40°F (4.5°C) minimum, 140°F (60°C) maximum at least 5°F (2.8°C) above dew point
Relative humidity:	95% 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.

Reducer .....Not recommended
Clean Up .....MEK R6K10
Purge Solvent .....MEK R6K10

Recommended Spray Equipment*
Pneumatic Spray
Pump.....Graco Hydra-Cat with a King Air Motor or XP 50 or larger system with remote manifold
Transfer Pumps .....5:1 Graco Monark or larger
Pressure.....2000 psi at gun pressure
Hose.....3/8” Resin, ¼” Isocyanate, ¼” whip hose from mixing manifold to gun, 25’ maximum whip hose length with 3/8" X 5” static mixing tubes with a 12 element disposable plastic insert.
Tip .....0.021" minimum

Hydraulic Spray
Pump.....Graco/Reactor or HXP3 system with #120 (resin) and #40 (Activator) cylinder setup
Transfer Pumps .....5:1 Graco Monark or larger
Pressure.....2000 psi at gun pressure
Hose.....3/8” Resin, ¼” Isocyanate, ¼” whip hose from mixing manifold to gun, 25’ maximum whip hose length with 3/8" X 5” static mixing tubes with a 12 element disposable plastic insert.
Tip .....0.021" minimum

Conventional Spray.....Not recommended

Brush** .....Repairs and touch only**

*Application training is required and spray equipment must be approved by Sherwin-Williams Technical Service.

**For touch up and repair utilize Sherwin-William Poly-Cote 115FR.

If specific application equipment is not listed above, equivalent equipment may be substituted and must be approved by Sherwin-Williams Technical Service.

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Agitate components thoroughly before use. Do not thin. Do not mix part A and B together (Except for Poly-Cote 115FR). Caution: Do not agitate at high speed or in a manner that would whip air or moisture in to the product. Both components should be heated to approximately 120°F (49°C) - 160°F (71°C) to achieve spray pattern consistency.

For Poly-Cote 115FR, agitate individual components for 3 minutes prior to combining them. Add the "B" Component to the "A" component and immediately agitate for 3 minutes. Immediately transfer the material from the container to the surface using the supplied brush like a spatula to get a large volume of material transferred to the substrate and then brush the material to a smooth appearance. Poly-Cote 115FR is intended to be applied in 2 coats. Apply the second coat while the first coat is still sticky but with no transfer of material onto your finger. (2 - 2.5 hours cure @ 75°F (24°C) approximate cure time).

Plural component application required for Poly-Cote 115, 1A:3B by volume

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**20.0** (500)	**>500*** (12,500)
Dry mils (microns)	**20.0** (500)	**>500*** (12,500)
~Coverage sq ft/gal** (m^2/L)	**3** (0.07)	**80** (1.96)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1600** (39.2)	

*250 mils (6250 microns) maximum for NSF applications, 26 mils (650 microns) maximum for FDA applications

**For Poly-Cote 115FR, approximate coverage is 30 sq ft/gal (0.74 m^2/L)

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

Drying Schedule:

	@ 45°F/7°C	@ 75°F/24°C	@ 105°F/41°C
Tack free:	6 hours	2 hours	1 hour
To recoat:	< 24 hours	< 24 hours	< 24 hours
To handle:	36 hours	12 hours	6 hours
Immersion*:	24 hours	12 hours	6 hours

*72 hours @ 75°F/24°C for NSF applications

If maximum recoat time is exceeded, abrade surface before recoating.

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

Pot life: 12-15 minutes @ 75°F/24°C

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

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PERFORMANCE TIPS

For immersion applications, a minimum total dry film thickness of 20 mils for steel is required. Always spark test in accordance with NACE SP0188 for steel after application. Repair holidays prior to placing substrate into service using Poly-Cote 115FR.

Use only heated, plural component equipment capable of producing 4,000 psi output consistently.

In order to prevent blockage of spray equipment, clean equipment before use or before extended downtime with MEK R6K10.

While spraying, use 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. All application shall be done in a manner that mitigates runs and sags and provides complete coverage on all surfaces, including difficult to spray areas like welds, seams and angles.

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, climatic conditions, and excessive film build.

Do not agitate in a manner that would whip air and moisture in to the product.

Consult you Sherwin-Williams representative for specific application and performance recommendations.

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with MEK R6K10. Clean tools and equipment immediately after use (including both A and B sides of plural component spray system) with MEK R6K10.

SAFETY PRECAUTIONS

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