Protective & Marine Coatings

ACROLON™ 218 HS
ACRYLIC POLYURETHANE

PART A	B65-600	GLOSS SERIES
PART A	B65-650	SEMI-GLOSS SERIES
PART B	B65V600	HARDENER

Revised: September 5, 2014

PRODUCT INFORMATION

5.22

PRODUCT DESCRIPTION

ACROLON 218 HS is a low VOC, polyester modified, aliphatic, acrylic polyurethane formulated specifically for in-shop applications. Also suitable for industrial applications. A fast drying, urethane that provides color and gloss retention for exterior exposure.

- Can be used directly over organic zinc rich primers (epoxy zinc primer and moisture cure urethane zinc primer)
- Color and gloss retention for exterior exposure
- Fast dry
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Gloss or Semi-Gloss
Color:	Wide range of colors available
Volume Solids:	65% ± 2%, mixed, may vary by color
Weight Solids:	78% ± 2%, mixed, may vary by color
VOC (EPA Method 24):	Unreduced: <300 g/L; 2.5 lb/gal
mixed	Reduced 10% with R7K15: <340 g/L; 2.8 lb/gal
mixed	Reduced 9% with MEK, R6K10: <340 g/L; 2.8 lb/gal
Mix Ratio:	6:1 by volume, 1 gallon or 5 gallon mixes premeasured components

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.5** (112.5)	**9.0** (225)
Dry mils (microns)	**3.0** (75)	**6.0** (150)
~Coverage sq ft/gal (m^2/L)	**175** (4.3)	**346** (8.5)
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 @ 6.0 mils wet (150 microns):

	@ 35°F/1.7°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	4 hours	30 minutes	20 minutes
To handle:	18 hours	6 hours	4 hours
To recoat:			
minimum:	18 hours	8 hours	6 hours
maximum:	3 months	3 months	3 months
To cure:	14 days	7 days	5 days
Pot Life: (reduced 5% with Reducer R7K15)	4 hours	2 hours	45 minutes
Sweat-in-Time:		None	

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.
Paint temperature must be at least 40°F (4.5°C) minimum.

Shelf Life:	Part A* - 36 months, unopened Part B - 24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
*Aluminum (Part A, Rex # B65SW655) has a shelf life of 24 months.	
Flash Point:	55°F (13°C), Seta, mixed
Reducer/Clean Up:	
Spray:	Reducer R7K15, MEK R6K10, or R7K111
Brush / Roll:	Reducer #132, R7K132 or R7K111

RECOMMENDED USES

Specifically formulated for in-shop applications.
For use over prepared metal and masonry surfaces in industrial environments such as:

- Structural steel
- Rail cars and locomotives
- Conveyors
- Bridges
- Tank exteriors
- Pipelines
- Ships
- Wind Towers - onshore and offshore
- Offshore platforms - exploration and production
- Suitable for use in USDA inspected facilities
- Conforms to AWWA D102 Outside Coating Systems #4 (OCS-4), #5 (OCS-5) & #6 (OCS-6)
- Acceptable for use in high performance architectural applications
- Acceptable for use over Stampede 1 and Stampede 1H Caulking
- A component of INFINITANK
- Over FIRETEX hydrocarbon systems
- Suitable for use in the Mining & Minerals Industry

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:
1 ct. Macropoxy 646 @ 6.0 mils (150 microns) dft
1 ct. Acrolon 218 HS Gloss @ 4.0 mils (100 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance[1]	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	43 mg loss
Adhesion[3]	ASTM D4541	1976 psi
Corrosion Weathering[3]	ASTM D5894, 27 cycles, 9072 hours	Rating 10 per ASTM D610, for rusting; Rating 10 per ASTM D714, for blistering
Direct Impact Resistance[1]	ASTM D2794	50 in. lb.
Dry Heat Resistance[1]	ASTM D2485, Method A	200°F (93°C)
Flexibility[1]	ASTM D522, 180° bend, 1/8" mandrel	Passes
Humidity Resistance[2]	ASTM D4585, 100°F (38°C), 1500 hours	Rating 10 per ASTM D610, for rusting; Rating 10 per ASTM D714, for blistering
Pencil Hardness	ASTM D3363	3H
Salt Fog Resistance[3]	ASTM B117, 15,000 hours	Rating 10 per ASTM D610, for rusting; Rating 10 per ASTM D714, for blistering

Meets the requirements of SSPC Paint No. 36, Level 3 for white and light colors. Dark colors may require a clear coat.

Complies with ISO 12944-5 C5I and C5M requirements.

Footnotes:
[1] Finish coat only tested
[2] Primer — Zinc-Clad II Plus
Intermediate — Macropoxy 646
Finish — Acrolon 218 HS
[3] Primer — Zinc-Clad III HS

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Protective & Marine Coatings

DIAMOND-CLAD®
CLEAR COAT URETHANE

PART A	CLEAR - GLOSS	B65T105
PART A	CLEAR - SEMI-GLOSS	B65T115
PART B	HARDENER	B65V105
PART C	CATALYST	B65C105
(OPTIONAL)	FADE-A-WAY DYE ADDITIVE	B65X105

Revised 2/12

PRODUCT INFORMATION

5.40

PRODUCT DESCRIPTION

DIAMOND-CLAD CLEAR COAT URETHANE is a three component, graffiti resistant, low VOC, acrylic polyurethane clear coat that enhances the finish and weathering properties of newly applied aliphatic urethane coatings. It exhibits excellent graffiti resistance and ease of application by brush or roller.
Designed to be applied within the recoat window of the respective Sherwin-Williams aliphatic urethane.

- Extends the service life and exterior weathering properties of urethane coatings.
- Optional Fade-A-Way Dye Additive available
- Enhances the color and gloss of urethane coatings.
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Gloss or Semi-Gloss
Color:	Clear
Volume Solids:	67% ± 2%, mixed, Gloss 66% ± 2%, mixed, Semi-Gloss
Weight Solids:	73% ± 2%, mixed
VOC (EPA Method 24): (mixed)	Unreduced: <300 g/L; 2.34 lb/gal Reduced 10%: 340 g/L; 2.8 lb/gal
Mix Ratio:	8:4:1; 3 premeasured components 0.81 gallons (3.06L) mixed

Recommended Spreading Rate per coat:

	Minimum		Maximum	
Wet mils (microns)	**1.5**	40	**3.0**	75
Dry mils (microns)	**1.0**	25	**2.0**	50
~Coverage sq ft/gal (m^2/L)	**545**	13.3	**1090**	26.6
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1088**	26.0		

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

Drying Schedule @ 2.0 mils wet (50 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	2 hours	30 minutes	20 minutes
To handle:	12 hours	3 hours	1.5 hours
To recoat with itself, if required:			
minimum:	12 hours	3 hours	1.5 hours
maximum:	7 days	7 days	7 days
To cure:	7 days	7 days	7 days
Pot Life:	2 hours	1 hour	30 minutes
Sweat-in-Time:		None	

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

Shelf Life:	Part A - 24 months, unopened Part B - 12 months, unopened Part C - 6 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	98°F (37°C) PMCC, mixed
Reducer/Clean Up:	R7K216 or R6K30

RECOMMENDED USES

- For exterior use over newly applied aliphatic urethane coatings in industrial environments
- To enhance urethane coatings by providing extended weathering properties
- Use where graffiti resistance is important
- Use on:
  - Water tanks
  - Pipelines
  - Refineries
  - Amuseument parks
  - Corporate logos/signs
  - Storage tank exteriors
  - Bridges
  - Wastewater facilities
  - Commercial buildings
- Acceptable for use in high performance architectural applications.
- Suitable for use in USDA inspected facilities

PERFORMANCE CHARACTERISTICS

Substrate*: Steel
Surface Preparation*: SSPC-SP10/NACE 2
System Tested*:
1st ct: Epolon II Multi-Mil Epoxy @ 2-4 mils (50-100 microns) dft
2nd ct: Poly-Lon HP @ 2-4 mils (50-100 microns) dft
3rd ct: Diamond-Clad Clear Coat @ 1-2 mils (25-50 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance (semi-gloss)	**ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load**	55 mg loss
Accelerated Weathering (gloss)	ASTM D4587, QUV-A, 10,000 hours	100% gloss retention
Adhesion (gloss)	ASTM D4541	1250 psi
Corrosion Weathering (gloss)	ASTM D5894, 9 cycles, 3000 hours	Passes, no blistering, cracking, rusting, or delamination
Direct Impact Resistance (semi-gloss)	ASTM D2794	120 in lb
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Exterior Exposure	5 years at 45° South	No blistering, cracking, or chalking; 85% gloss retention, <4 MacAdam unit color change
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Graffiti Resistance	Graffiti materials applied - epoxy ester spray, acrylic spray, alkyd spray, ballpoint pen ink, crayon, lipstick	All materials were removed easily and completely with either xylene or MEK
Pencil Hardness (gloss)	ASTM D3363	HB
Salt Fog Resistance (gloss)	ASTM B117, 3000 hours	Passes, no blistering or rusting

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