Protective & Marine Coatings

ENVIROLASTIC® AR425

PART A	B81V3200	STANDARD ISOCYANATE
PART A	B81V3205	FAST CURE ISOCYANATE
PART B	B81-3200	SERIES

Revised: December 11, 2023

PRODUCT INFORMATION

TRM.85

PRODUCT DESCRIPTION

ENVIROLASTIC AR425 is a 100% solids, spray-applied, aromatic polyurea coating and lining system, which exhibits extraordinary toughness and elastomeric performance characteristics. It can be applied at thicknesses of 30-250 mils (750-6250 microns) or greater in multiple passes during a single application.

- Fast cure - short down time
- Seamless flexible and waterproof
- Bridges moving cracks to 1/8"
- Impact, tear,and abrasion resistant
- Retains physical properties from -20°F (-29°C) to 250°F (121°C)
- Low odor
- Chemical resistant
- Resistant to foot traffic

PRODUCT CHARACTERISTICS

Finish:	Semi-Gloss
Color:	Select colors available: Beige (SW6674), Medium Gray (SW2849), Gray (SW7659)
Volume Solids:	100%
VOC (calculated):	<50 g/L ; 0.42 lb/gal
Mix Ratio:	1:1

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**30.0** (750)	**250.0** (6250)
Dry mils (microns)	**30.0** (750)	**250.0** (6250)
~Coverage sq ft/gal (m^2/L)	**6** (0.15)	**53** (1.3)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1600** (39.2)	

Drying Schedule @ 30.0 mils wet (750 microns):

	Standard Iso @ 73°F/23°C *50% RH*	Fast Cure Iso @ 73°F/23°C *50% RH*
To touch:	45 seconds	12 seconds
To recoat:		
minimum:	45 seconds	12 seconds
maximum:	16 hours	16 hours
Gel time:	15 seconds	6 seconds
Tack free:	45 seconds	12 seconds
Light traffic:	2 hours	1 hour
To cure:	24 hours	24 hours

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

Pot Life:	None	None
Sweat-in-time:	None	None

Shelf Life:	12 months, unopened Store indoors at 40°F (4°C) to 100°F (38°C)
Flash Point:	200°F (93°C)
Viscosity (mixed):	550 cps
Reducer:	Not recommended
Clean Up:	Butyl Cellusolve™ (R6K25), Dowanol PM™, or Propylene Glycol

RECOMMENDED USES

Designed for use in immersion or atmospheric exposure as a tough, flexible, impact resistant, waterproof coating and lining system. Ideally suited for use in areas to include:

- Water & wastewater linings
- Tank linings
- Cooling tower linings
- Secondary containment
- Geotextile linings
- Select fuel storage & containment
- Marine bridge and deck
- Offshore platforms
- Traffic bearing waterproofing
- Manhole and sewer linings
- Basins and reservoirs
- Cold storage areas
- Waterparks & theme parks
- Marine bilge and tanks
- Tunnels
- Pipe line coating and select lining
- Rail bridge decks
- Mechanical rooms

- Nuclear Power Plants**
- Nuclear fabrication shops**
- DOE Nuclear Weapons Facilities **
- DOE Nuclear Fuel Facilities**

- Suitable for use in the Mining & Minerals Industry.
- Suitable for use in USDA inspected facilities
- This product meets specific design requirements for non-safety related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities*.**

* Nuclear qualifications are NRC license specific to the facility.

**Standard Iso only

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel (lining):			
1 ct.	EnviroLastic AR425	60.0-80.0*	(1500-2000)*
Steel, with hold primer (lining):			
1 ct.	Macropoxy 240	1.0 -1.5**	(25-40)**
1 ct.	EnviroLastic AR425	60.0-80.0*	(1500-2000)*
Concrete (lining):			
1 ct.	Corobond HS Epoxy Primer	3.0-4.0**	(75-100)**
1 ct.	EnviroLastic AR425	60.0-80.0*	(1500-2000)*
Concrete (containment, flooring):			
1 ct.	Corobond HS Epoxy Primer	3.0-4.0**	(75-100)**
1 ct.	EnviroLastic AR425	40.0-60.0*	(1000-1500)*
1-2 cts.	Cor-Cote HCR FF	15.0-20.0	(375-500)
Concrete or Steel, low temperature or fast set:			
1 ct.	Macropoxy 646	3.0-8.0	(75-200)
or			
1 ct.	Dura-Plate 235	3.0-8.0	(75-200)
1 ct.	EnviroLastic AR425	30.0-40.0*	(750-1000)*
Geo-Textile Lining (earthen base):			
1 ct.	Geo-textile non-woven, 3-4oz. Amoco "Petromat" Style 4599		
1 ct.	EnviroLastic AR425	80.0-100.0*	(2000-2500)*

*When used as a lining in immersion service, a minimum total dry film thickness of 60.0 mils (1500 microns) is required.
** Refer to Performance Tips section

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

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.

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:
Steel:
Atmospheric: SSPC-SP10/NACE 2, 3 mil (75 micron) profile
Immersion: SSPC-SP10/NACE 2, 3 mil (75 micron) profile
Concrete & Masonry: SSPC-SP13/NACE 6 or ICRI No. 310.2, CSP 3-5.

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:
Material: 150°F (66°C) minimum, 170°F (77°C) maximum
Air and surface: -20°F (-29°C) minimum, 120°F (49°C) maximum
At least 5°F (2.8°C) above dew point
Relative humidity: 80% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:
Part A: 53 gallon (200L) drums
Part B: 53 gallon (200L) drums

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.

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APPLICATION BULLETIN

TRM.85

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 (immersion service)
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (3 mils / 75 microns). Remove all weld spatter and round all sharp edges. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Iron & Steel (atmospheric service)
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (3 mils / 75 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2, CSP 3-5. 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. Primer required.

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. 310.2 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. 310.2, CSP 3-5.

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:
Material: 150°F (66°C) minimum, 170°F (77°C) maximum
Air and surface: -20°F (-29°C) minimum, 120°F (49°C) maximum
At least 5°F (2.8°C) above dew point

Relative humidity: 80% 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 .....Not recommended

Clean-up .....Butyl Cellusolve™ (R6K25), Dowanol PM™, or Propylene Glycol

Plural Component Heated Spray Equipment:
Equipment.....Graco Reactor EXP2 or HXP3
Gun .....GX7 DI,GX7-400, or GX-8
Fluid Pressure.....2,200 psi
Air Pressure .....100 psi
A Side Temperature 150-170F
B Side Temperature 150-170f
Inlet Strainer Screen .....30 mesh
Gun Screen.....80 mesh

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.

Mixing Instructions: Agitate resin blend (B) component thoroughly with a drum mixer before use to disperse pigment and assure homogeneity. Do not thin. Do not mix "A" and "B" resins together. **Caution: Do not agitate in air and moisture.**

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**30.0** (750)	**250.0** (6250)
Dry mils (microns)	**30.0** (750)	**250.0** (6250)
~Coverage sq ft/gal (m^2/L)	**6** (0.15)	**53** (1.3)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1600** (39.2)	

Drying Schedule @ 30.0 mils wet (750 microns):

	Standard Iso @ 73°F/23°C *50% RH*	Fast Cure Iso @ 73°F/23°C *50% RH*
To touch:	45 seconds	12 seconds
To recoat:		
minimum:	45 seconds	12 seconds
maximum:	16 hours	16 hours
Gel time:	15 seconds	6 seconds
Tack free:	45 seconds	12 seconds
Light traffic:	2 hours	1 hour
To cure:	24 hours	24 hours

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

Pot Life:	None	None
Sweat-in-time:	None	None

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 Butyl Cellusolve™ (R6K25), Dowanol PM™, or Propylene Glycol.. Clean tools and equipment immediately after use (including both "A" and"B" sides of plural component spray system) with Butyl Cellusolve™ (R6K25), Dowanol PM™, or Propylene Glycol.

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PERFORMANCE TIPS

For concrete, always perform Calcium Chloride test as per ASTM F1869. Do not proceed with MVE >3 lbs.

**Where primers are used, do not fill the profile on concrete or steel with excess primer. Topcoat epoxy primers immediately after they become tack free. "Tack free" is defined as slight to medium pressure with a gloved hand, placed on a primed surface, that when lifted shows a slight imprint or distortion to the surface, with no transfer of primer to the glove.

For immersion applications, a minimum total dry film thickness of 40 mils (1000 microns) on steel and 60 mils (1500 microns) on concrete is required.

For Immersion Service: (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

May be applied in one or two coats to achieve the recommended film thickness.

For steel, stripe coat all chine, welds, bolted connections, and sharp angles to prevent early failure in these areas. For concrete, all cracks must receive a 6" wide by 30 mil (750 micron) dft detail coat.

Use only heated, plural component equipment capable of producting 2,500 psi at 160°F (71°C) and 2 gallon (7.56L) /minute output consistently.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Butyl Cellusolve™ (R6K25), Dowanol PM™, or Propylene Glycol.

While spraying, 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.

Do not agitate in air and moisture.

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

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

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