CORLAR® 2.1-ST™

SATIN HIGH SOLIDS EPOXY MASTIC

(formerly Corlar® 25P ™)

Corlar® 2.1-ST™ is a satin gloss, high build epoxy mastic, two-package, VOC conforming product (250 g/L)* based on amido amine modified polyamide epoxy technology. The resulting highly durable coating delivers outstanding corrosion and chemical resistance. *See Additional Comment #11.

SUGGESTED USES:

As a high performance direct-to-metal (DTM) coating or topcoat on carbon steel, galvanized steel, stainless steel, aluminum, concrete, concrete block and wood where:

- Rusted, hand or power-tool cleaned surfaces must be protected.
- Single coat applications up to 250 mµ dry film thickness are required.
- Application will be made over damp surfaces and/or under conditions of high relative humidity
- Excellent resistance to chemical and/or marine environments is required.
- Outstanding abrasion resistance and edge protection are required.
- Application by brush and roller, in addition to spraying, may be necessary.
- Application may be made at temperatures as low as 2°C.
- No induction time and long pot life will improve productivity.

Corlar® 2.1-ST™ may also be used as a high performance tank lining on carbon steel or concrete for immersion service in near neutral pH water, fresh water, or saltwater. Corlar® 2.1-ST™ is not recommended for use with potable water. Contact your Axalta Coating Systems Representative for specific immersion service recommendations and procedures.

NOT RECOMMENDED FOR:

- Immersion service in potable water, chemicals or hydrocarbons.
- Exterior exposure without topcoat.

RECOMMENDATIONS FOR IMMERSION SERVICE:

Corlar® 2.1-ST™ when applied in multiple coats (at least 2) at 250-300 mµ DFT is recommended for immersion service in near neutral, fresh or saltwater exposures. It is not recommended for use with potable water. It may be used for fire water towers, ballast tanks, clarifiers, wastewater treatment plants, offshore structures, pier pilings and supports and other areas where a high level of water resistance is required. See Additional Comment #5.

COMPATIBILITY WITH OTHER COATINGS:

Corlar® 2.1-ST™ is highly compatible with most coating types. It may be used over most aged and hard cured coatings in good condition. Testing for lifting, bubbling and adhesion is recommended to assure compatibility with unknown coatings. Contact your Axalta Coating Systems Representative for specific recommendations.

MAXIMUM SERVICE TEMPERATURE:

Up to	120°C	Continuous
	150°C	Intermittent
	37.8°C	Immersion

COLOR CHANGE/CHALKING:

Corlar® 2.1-ST™ is primarily designed for corrosion protection. Corlar® 2.1-ST™ will chalk upon exposure to sunlight. If gloss, color retention and color stability are important, Corlar® 2.1-ST™ should be topcoated with Imron® 2.8-HG™ or

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Imron® 3.5-HG™, Tufcote 3.5-HGNI™ or other appropriate topcoat. In high temperature applications, some yellowing may occur. See Additional Comment #8.

PERFORMANCE PROPERTIES:

Abrasion	Excellent	Humidity	Excellent
Acids	Very Good	Salts	Excellent
Alkalis	Excellent	Solvents	Excellent
Ammonia	Excellent	Weather	Very Good (will chalk on exterior exposure)

VOLATILE ORGANIC CONTENT (VOC) THEORETICAL:

Condition	Thinner	% Max	VOC (lbs/gal)*	VOC (g/l)*
Airless Normal	Y32035™	2-5	2.3	276
Conventional	Y32035™	7-10	2.5	300
Max. Pot Life	Y32035™	15	2.7	324
	RT001P™	15	2.8	336
Hot & Windy	T-8054™	10-15	2.8	336
Brush & Roll	RT001P™	10-15	2.8	336
Mixed Unthinned*			2.1	252

For 2.08 Industrial Maintenance Restricted Areas

Thinner	% Max	VOC (lbs/gal)*	VOC (g/l)
T-1025	**10**	**2.0 Max***	**240**

*Reported values at higher level of reduction (theoretical/avg.) Reported values are averaged across color range.

COLOR:

Various. Select Factory Packaged colors and custom mixes available.

GLOSS:

Satin Finish

CURE TIME – HOURS @ 50% R.H. @ 125 MICRONS SUGGESTED DFT

	50°F (10°C)	70°F (21°C)	90°F (32°C)
To Touch	3-4	2-3	1-2
To Handle	8	4	2
To Recoat	5	3	2
Full Cure	14 Days	7 Days	4 Days

THEORETICAL COVERAGE:

28.3 m^2/L @ 25 mµ DFT
5.7 m^2/L @ 125 mµ DFT
2.8 m^2/L @ 250 mµ DFT
*Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

SUGGESTED FILM BUILD (DFT):

Single Coat	125-200 mµ in noncorrosive environment
	250-300 mµ in corrosive environment
Primer	75-200 mµ
Mid Coat	100-150 mµ

Immersion	250-300 mµ

VOLUME SOLIDS (MIXED) VARIES WITH COLOR (BEFORE REDUCTION):

72 ± 2%

WEIGHT SOLIDS (MIXED) VARIES WITH COLOR (BEFORE REDUCTION):

83 ± 2%

SPECIFIC GRAWITY (MIXED, BEFORE REDUCTION):

1.41 kg/L approx.

FLASH POINT (TAG CLOSED CUP):

Corlar® 2.1-ST™ Base > 37.8°C
Corlar® VF-525™ Activator < 23°C

PACKAGING:

1 & 5 gallon containers (3.79 & 18.93 L)

SHIPPING WEIGHT (KGS.) APPROXIMATE:

1 gallon container: 6.35kg (base) / 4.99kg (activator);
5 gallon container: 63 (base) / 55 (activator)

SHELF LIFE & STORAGE CONDITIONS:

Store in a dry, well ventilated area, storage temperatures should be between -30°F (-34°C) and 120°F (48°C)

- Shelf Life 1 year minimum
- Corlar® 2.1-ST™ may settle. Agitate before each use and intermittently while sitting in storage.

SAFETY:

Consult the (Material) Safety Data Sheet for this product prior to use.

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APPLICATION INSTRUCTIONS

SURFACE PREPARATION:

For atmospheric service, an SSPC-SP 6 Commercial Blast Cleaning is preferred for optimal performance. If not possible or practical, then Hand Tool Clean to an SSPC-SP 2 or Power Tool Clean to an SSPC-SP 3. For immersion service, an SSPC-SP 5 White Metal Blast is required.

ACTIVATION:

Using a shear mixer at low speed so to create a small vortex, mix Corlar 2.1 ST base. Using same procedure, mix VF-525 activator. Slowly add 1 part Corlar VF -525 activator to 1 part Corlar 2.1 ST base. Mix thoroughly. DO NOT SHAKE. You may begin painting immediately, —there is no induction time.

POT LIFE:

@ 8 hours @ 21°C to 32°C when reduced 15% by volume with Y-32035™ Thinner.

REDUCTION:

2-5% of Y-32035™ is required under normal conditions for airless spray. 7-10% with Y-32035™ is the suggested level of thinning for conventional spray. For maximum pot life, reduce 15% by volume with Y-32035™. Use 10-15% T-8054™ Thinner in hot or windy conditions for spray application. Reduce 10-15% with RT001P™ Thinner when applying by roller or brush. If more reduction is required, consult your local Axalta Coating Systems Representative.
See Additional Comments #2, #11.

APPLICATION THINNERS:

Normal Conditions — Y-32035™
Hot or Windy Conditions — T-8054™ (spray)

CLEAN UP THINNERS:

T-8054™ or MEK

APPLICATION CONDITIONS:

Do not apply if material, substrate or ambient temperature is below 35°F (2°C) or above 100°F (38°C).

APPLICATION EQUIPMENT:

- Apply by brush, roll, or spray
- Manufacturers listed below are a guide. Others may be used. Changes in pressure and tip size may be required to achieve proper application.

BRUSH & ROLL:

- ½"- ¾" nap Wooster Pro/Doo-Z roller cover. Keep roll wet. Roll in one direction, rewet, then cross roll.
- 3”-4” Wooster China Bristle Brush

CONVENTIONAL SPRAY:

	Binks	DeVilbiss	Sata
Spray Gun:	2001	JGA	K3RP
Fluid Nozzle:	67SS	D (2.2)	1.1
Pot Pressure:			25
Atomizing Pressure			36
Air Cap:	67PB	64 HD	

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HVLP SPRAY:

	Binks	DeVilbiss
Spray Gun:	Mach 1	GTi
Fluid Nozzle:	905 (2.3)	2.0
Air Cap:	905P	2000

AIRLESS SPRAY:

Pump:	Graco Extreme 33:1
Airless Gun:	Graco 207945
Fluid Hose:	3/8" x 50' max.
Tips:	414-527
Minimum pressure to avoid fingering:	2400 psi min.

ADDITIONAL COMMENTS:

1. USDA approved.
2. At 15% reduction, reduced maximum film thickness will be obtained.
3. If using D fluid nozzle, minimize reduction to avoid runs and sags.
4. Recoating of Corlar® 2.1-ST™ should be done as soon as possible after dry to touch, a minimum of 3-5 hours at 21**°C**, up to overnight.
   If you cannot recoat within 7 days up to 30 days, and you have not exposed the Corlar® 2.1-ST™ to strong exterior sunlight and elevated temperatures over 37.8°C, you should water wash with a minimum of 1500 psi to remove any surface contamination.
   If you cannot recoat before 30 days and have exposed the Corlar® 2.1-ST™ surfaces to exterior sunlight and elevated temperatures over 37.8°C, you should either:
   Option 1: Water wash the surface with 1500 psi and apply 25-50 mµ DFT tack-mist coat Corlar® 2.1-ST™ over the Corlar® 2.1-ST™ painted surface and topcoat within 3-5 hours up to overnight, or
   Option 2: Water wash the surface with 1500 psi and abrasively brush-blast to an SSPC-SP7 (sweep-blast) and topcoat within 3-5 hours up to overnight.
5. Do not roll for immersion applications. Spray apply only.
6. When applying over inorganic zinc primers, a mist coat is recommended for best results to minimize bubbling. Apply a mist coat and allow bubbles to break. Apply a full wet coat after mist coat.
7. Under certain high humidity and low temperature conditions, an amine blush is possible. This blush should be removed before proceeding with next coat by wiping surface with an alcohol-based solvent.
8. Epoxies chalk with extended exposure to sunlight. Lack of ventilation, incomplete mixing, miscatalyzation or the use of heaters that emit carbon dioxide and carbon monoxide during application and initial stages of curing may cause yellowing to occur.
9. For intermittent service temperatures above 120°C, do not topcoat.
10. For use in 250 g/L VOC Restricted Areas. Corlar® 2.1-PR™ must be reduced with T-1025 to remain compliant.

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ASTM INFORMATION

Physical properties are averages. Properties for Corlar® 2.1-ST™ are enhanced when used in conjunction with topcoats such as Imron® polyurethane or applied at higher film builds. The results listed below are obtained when applying Corlar® 2.1-ST™ (gray) to 130 mµ DFT. For specific system results, contact Axalta Coating Systems Technical Service.

♦ Paint System	Corlar® 2.1-ST™	
♦ Type/Color	Epoxy/Gray	
♦ DFT	130 mµ	
♦ Salt Fog (ASTM B117)	1000 hours	no rusting, no blisters
	2000 hours	no rusting, few #2 blisters at the scribe
	3000 hours	no rusting, no undercutting at the scribe, medium #2 blisters at the scribe
♦ Relative Humidity (ASTM D2247)	1000 hours	no rusting, no blisters
	2000 hours	no rusting, no blisters
	3000 hours	no rusting, no blisters
♦ Dry Heat (ASTM D2485)	120°C for 24 hours	no cracking, very slight loss of adhesion, slight discoloration
♦ Electrical Resistance (ASTM D2457):	28.3X10^17	
♦ Adhesion (ASTM D4521 A2):	1834 psi	adhesion failure between coating and substrate
♦ Cleveland Cond (ASTM D4585):	1000 hours	no rusting, no blisters, no delamination
♦ UV Con (ASTM D4587)*	3000 hours	Gloss before exposure 48.9
		Gloss after exposure 1.5
	Evaluation	no rusting, no blisters, no delamination
♦ Impact (ASTM D2794):	3 inch pounds	
♦ Mandrel Bend (ASTM D522):	% Elongation - 0%	
♦ Taber Abrasion (ASTM D4060):	weight loss in grams - .07	

*8 hr UV @ 50°C, 4 hr condensation @ 40°C, gloss readings @ 60°