DuPont™ CORLAR® 18570S™

CORROSION RESISTANT DIRECT TO METAL EPOXY PRIMER

Description

Corlar® 18570S™ is a high build, two-component, 2.1 VOC, direct to metal epoxy primer. Based on DuPont modified polyamide epoxy technology, Corlar® 18570S™ delivers outstanding corrosion protection and chemical resistance for applications above and below the waterline.

Suggested Uses

As a high performance direct-to-metal (DTM) coating where:

- As an immersion grade coating
- Single coat applications up to 10 mils dry film thickness are required.
- Application will be made over damp surfaces and/or under conditions of high relative humidity
- Excellent resistance to marine environments is required.
- Outstanding abrasion resistance and edge protection are required.
- Application by brush and roller, in addition to spraying, may be necessary (see *Additional Comment #4*)
- Application must be made at temperatures as low as 35°F.
- No induction time and long pot life will improve productivity.

Corlar® 18570S™ can be used as a high performance tank lining on carbon steel for immersion service in near neutral pH water, fresh water, or saltwater. Corlar® 18570S™ is not recommended for use with potable water.

Not Recommended For

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

Recommendations for Immersion Service

Corlar® 18570S™ is recommended for immersion service in near neutral, fresh or saltwater exposures when applied in multiple coats (at least 2) at 10 – 12 mil DFT. It is not recommended for use with potable water. Corlar® 18570S™ is ideal for ballast tanks, wastewater holding tanks, offshore structures, pier pilings, supports and hulls, and other applications where a high level of water resistance is required.

Compatibility with Other Coatings

Corlar® 18570S™ is highly compatible with most coating types. It may be used over most aged and cured coatings in good condition. Testing for lifting, bubbling and adhesion is recommended to assure compatibility with unknown coatings. Contact your DuPont Marine Finishes Sales Representative for specific recommendations.

Maximum Service Temperature

- Up to 250° F Continuous
- 300° F Intermittent
- 100° F Immersion

Color Change & Chalking (Above the Waterline)

Corlar® 18570S™ is primarily designed for corrosion protection. Corlar® 18570S™ will chalk upon exposure to sunlight. If gloss, color retention and color stability are important, Corlar® 18570S™ should be topcoated with DuPont™ Imron® MS100™, DuPont™ Imron® MS600™ or other appropriate topcoat. Some yellowing may occur when applied in high temperatures (see *Additional Comment #7*).

Performance Properties

Abrasion:	Excellent	Weather :	Very Good
Alkalis:	Excellent	Acids :	Very Good
Humidity:	Excellent	Ammonia:	Excellent
Solvents:	Excellent	Salts :	Excellent

Volatile Organic Content (VOC) Theoretical

Condition		% Thinner	VOC (max bs/gal)*	VOC (g/l)*
Mixed Unthinned*		None	2.1	252
Airless	18570S™	2 - 5	2.4	288
Conventional	18570S™	10	2.6	312
Hot & Windy	18570S™	10 - 15	2.8	336

* Reported values at higher level of the reduction (theoretical/avg.)

Color

Gray

Gloss

Satin Finish

Cure Time – Hours @ 50% R.H. @ 5 Mils Suggested DFT

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

Theoretical Coverage

1155 ft^2@ 1 mil DFT, 230 ft^2@ 5 mils DFT, 115 ft^2@ 10 mils DFT

*Material losses during mixing and application will vary and must be taken into account when estimating job

Suggested Film Build (DFT)

Above the waterline:

- Single coat: 10 – 12 mils in corrosive environment
- Single coat: 5-8 mils in non corrosive environment
- Primer application: 4-8 mils

Below the waterline:

- 10-12 mils applied in 2 coats

Volume Solids (Mixed) (Before Reduction)

71.2±2%

Weight Solids (Mixed) (Before Reduction):

81.5±2%

Flash Point (Tag Closed Cup)

Corlar® 18570S™ >100°F
Corlar® 18170S™ <73°F

Packaging

1 gallon containers

Shipping Weight (Lbs.) Approximate

1 gallon container: 13 (base) / 11.5 (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® 18570S™ and Corlar® 18170S™ may settle during storage. Agitate both components thoroughly before each use and prior to activation.

Safety

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

Application Instructions

Surface Preparation

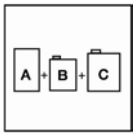
All surfaces to be coated should be free of any dirt, oils, and surface contaminants.

Steel

- For atmospheric service, an SSPC-SP 6 Commercial Blast Cleaning is preferred for optimal performance. If not possible or practical, then Power Tool Clean to an SSPC-SP 3. D/A Sand with 80 grit.
- For immersion service, an SSPC-SP5 White Metal Blast is required.

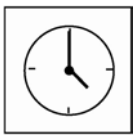
Aluminum

- For atmospheric service, Commercial Blast Cleaning similar to an SSPC-SP 6 is preferred for optimal performance. If not possible or practical, then Power Tool Clean to an SSPC-SP 3 using coarse abrasive (24-36 grit) or D/A Sand with 80 grit.
- For immersion service, a 2-3 mils (50 to 70 microns) White Metal Blast surface profile similar to an SSPC-SP5 is required. *See Additional Comment 4



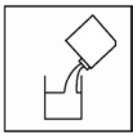
Activation

Add 1 part Corlar® 18170S™ Activator to 1 part Corlar® 18570S™ gray base.
Mix until thoroughly blended. For best results, allow 15 minutes induction time.



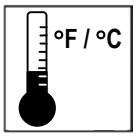
Pot Life and Induction Time

8 hours at 70° to 90°F (21°C) when reduced 15% by volume with DuPont™ 18750S™ Thinner



Reduction

- 2-5% of DuPont™ 18750S™ is required under normal conditions for airless spray.
- 10% with DuPont™ 18750S™ is the suggested level of thinning for conventional pressure fed spray.
- Use 10-15% DuPont™ 18750S™ in hot or windy conditions for spray application.
- If more reduction is required, consult your local DuPont Marine Finishes Sales Representative.



Application Thinners

DuPont™ 18750S™

Clean Up Thinners

DuPont™ 18750S™ 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 spray for immersion service.
- The manufacturers listed below are for guidance. Other manufacturers may be used. Changes in pressure and tip size may be required to achieve proper application.

Brush & Roll

May be used for repairs or small surface areas (*not recommended for Immersion)

- 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

Spray Equipment

Conventional Pressure Fed		
	Model	**Tip Size**
Sata	K1, K3, or K3 RP	1.3 – 1.9 mm
Devilbis	JGA or MBC	1.4 – 2.0 mm
Graco	DeltaSpray XT	1.3 – 1.8 mm
Iwata	W-77, W-71, or W-200	1.2 – 1.8 mm
Binks	2001 or 95	1.2 – 1.8 mm
Kremlin	M22HPAP	1.2 – 1.8 mm
Airless Spray		
Graco	Silver or Plus	.015 - .019
Iwata	ALG or Airlessco Guns	.015 - .019
Binks	Airless 1	.013 - .018
Sata	Orca 32:1 pump, Airless 250 II	.013 - .018

Additional Comments

1. At 15% reduction, reduced maximum film thickness will be obtained.
2. If using a fluid tip 1.8mm or larger, minimize reduction to avoid runs and sags.
3. Recoating of Corlar® 18570S should be done as soon as possible once dry to touch, a minimum of 3 – 5 hours at 70°F up to overnight. If you can't recoat within 7 days and you have not exposed Corlar® 18570S™ to strong exterior sunlight and elevated temperatures over 100°F, you should water wash with a minimum of 1500 psi to remove any surface contamination. If you can't recoat before 7 days or have exposed Corlar® 18570S™ surfaces to exterior sunlight and elevated temperatures over 100°F, you have three options:
   Option 1: D/A sand with 80 grit abrasive to prepare surface to accept subsequent coatings.
   Option 2: Water wash the surface with 1500 psi and apply 1-2 mils DFT tack-mist coat Corlar® 18570S™ over the Corlar® 18570S™ painted surface and topcoat within 3-5 hours up to overnight.
   Option 3: Weather 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.
4. Do not roll for immersion applications. Spray apply only. Do not use copper containing abrasives or slag, as these will cause accelerated corrosion.
5. 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.
6. 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.
7. For intermittent service temperatures above 250°F, do not topcoat.

6/2009