



## ULTRAGARD 310 HI-SOL ACRYLIC URETHANE

### DESCRIPTION

UltraGard 310 is a premium quality high solids, high gloss, and low V.O.C. acrylic aliphatic urethane. It is a two component finish coat that yields a hard, smooth surface for industrial and marine environments. Product advantages include:

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|---|--|
| 1. High Gloss Finish                                | 4. Excellent color and gloss retention     |
| 2. Low V.O.C.                                       | 5. Excellent film durability               |
| 3. Excellent resistance to chipping and scratching. | 6. Wide color selection                    |
|   | 7. Lead and chromate free colors available |

### FIELD OF APPLICATION

UltraGard 310 is used as a finish coat over properly primed surfaces in industrial and marine environments where long term chemical resistance, gloss, and color retention are required. Product applications include:

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| 1. Offshore structures                 | 5. Refineries and petrochemical plants |
| 2. Ships, barges, other marine vessels | 6. Heavy equipment                     |
| 3. Storage tanks                       | 7. Industrial machinery                |
| 4. Pipelines                           | 8. Pulp and paper mills                |

### SERVICE CONDITIONS

UltraGard 310 is not recommended for immersion service. It will withstand continuous dry heat of 250°F (121°C) and intermittent dry heat to 300°F (149°C). The color may change as these limits are approached, but the film will remain intact. Typical chemical resistance is as follows:

<u>Exposure</u>	<u>Splash &amp; Spill</u>	<u>Fumes</u>
Acids	Very Good	Excellent
Alkalies	Very Good	Excellent
Solvents	Very Good	Excellent
Salt Water	Excellent	Excellent
Water	Excellent	Excellent

### TECHNICAL DATA

TYPE	Acrylic-aliphatic urethane	
VOLUME SOLIDS	60% Varies slightly with color.	
V.O.C.	As Supplied: 2.95 lb/gal (350 g/l)	Varies slightly with color.
	Thinned 10%: 3.34 lb/gal (401 g/l)	Varies slightly with color.
DENSITY	9.9 lbs/gal mixed (1.18 kg/l) Varies with color.	

*Manufacturers of Quality Paints, Protective Coatings, and Lubricants*  
Esgard, Inc. 515 Debonnaire Road Scott, Louisiana 70583 U.S.A.  
(337) 234-6327 Fax (337) 234-0113 1-800-888-2511

[www.esgard.com](http://www.esgard.com)



COVERAGE (Theoretical) 962 sq ft/gal at 1 mil dry (1.7 mils wet)  
25.9 sq m/l at 25 microns dry (43 microns wet)

321 sq ft/gal at 3 mils dry (5.2 mils wet)  
8.6 sq m/l at 75 microns dry (129 microns wet)

NOTE: When figuring practical coverage, allow for application losses, surface irregularities, any solvent addition, etc.

RECOMMENDED DRY FILM THICKNESS 2.0 - 3.0 mils (50-75 microns). Lighter colors may require more dry film thickness or two coats to achieve optimum hide.

DRY TIME (HOURS) @ 2 MILS DFT 65% R.H	Set To Touch	To Handle	Recoat W / 310	Final Cure
40°F ( 5°C)	6	20	20	14 Days
60°F (16°C)	4	12	7	7 Days
80°F (27°C)	3	6	3	4 Days
100°F (38°C)	1	3	2	2 Days

**SURFACE PREPARATION** Thoroughly clean any oil or grease contaminated areas with Esgard Surface Conditioner or a detergent wash followed by a fresh water rinse and allow drying in accordance with SSPC-SP1-82.

**SUBSTRATES** Apply over clean, dry properly primed or prepared ferrous and galvanized metal, aluminum, and masonry surfaces. For application over aged painted surfaces, dull all glossy areas by sanding or other methods. A test patch is always recommended to test compatibility and adhesion over aged painted surfaces.

**APPLICATION** Mix – Power mix components separately, then mix 4:1 by volume A:B. Mix completely all of Part A with Part B. Since this product is sensitive to moisture, do not use partial kits. Allow to stand for 15 minutes to thoroughly mix and ingest.

Thin - Thin only as needed up to 10% (typically 5%) by volume to obtain proper consistency. For all spraying, brushing, and rolling use the following:

Above 80°F (27°C)	Esgard Thinner 106
Below 80°F (27°C)	Esgard Thinner 103

NOTE: The use of non-specified thinners may affect application characteristics and product performance.

Spray - Use suitable conventional or airless spray equipment. Flush equipment with Thinner 103 before use. The following has been found adequate:



Conventional - Pressure pot should have an oil/water trap, double regulators, and minimum 3/8" I.D. fluid and air hose. Gun should be a DeVilbiss with a (E) tip and # 78 air cap, or Binks with a #66 set up.

Airless - Use Graco Bulldog 30:1 or equal with Teflon packing with minimum 3/8" I.D. fluid hose. Gun should have a fluid tip size .413 - .517. Fluid tip pressure should be 1300 - 2600 p.s.i.

Brush – Apply UltraGard 310 with a clean quality paint brush.

Roll – Apply UltraGard 310 with a quality short to medium nap roller with phenolic core. A solvent resistant foam roller provides an excellent finish.

Note: Two coats may be necessary to obtain proper film thickness because brushing and rolling tend to push material thinner than required.

**POT LIFE**  
(As Supplied)

<u>TEMPERATURE</u>	<u>HOURS</u>
40°F ( 5°C)	12
60°F (16°C)	8
80°F (27°C)	6
100°F (38°C)	3
125°F (52°C)	1.5

Pot life ends when viscosity changes and spraying and film build characteristics are impaired.

**CLEAN UP**

Esgard Thinner 103 or 106. For personal cleanup, use soap and water.

**APPLICATION / SERVICE LIMITATIONS**

<u>Temperature and Humidity:</u>		<u>MIN</u>	<u>MAX</u>
Application (Ambient)		40°F (4°C)	130°F (54°C)
Application (Material)		40°F (4°C)	130°F (54°C)
Surface		40°F (4°C)	140°F (63°C)
Humidity		0%	90%
Service			
	<u>Non-Immersion Dry</u>		
	Continuous	–	250°F (121°C)
	Intermittent	–	300°F (149°C)
	<u>Immersion</u>	(Not recommended)	
Storage		45°F (7°C)	100°F (38°C)

**DO NOT APPLY** when the surface temperature is less than 5°F (3°C) above the dew point. In addition, ambient conditions must remain above the dew point for a minimum of 3 hours following the application of UltraGard 310 Acrylic Aliphatic Urethane to prevent water spots or loss of gloss.



**ORDERING INFORMATION**

CONTACT # 1-800-888-2511

SHIPPING WEIGHT	<u>1 GAL KIT</u>	<u>5 GAL KIT</u>
UltraGard 310	12.0 lb (5.5 kg)	57.0 lb (26.0 kg)
	<u>1 GAL</u>	<u>5 GAL</u>
Thinner 103	8.5 lb (3.9 kg)	42.0 lb (19.0 kg)
Thinner 106	8.5 lb (3.9 kg)	42.0 lb (19.0 kg)

FLASH POINT		
UltraGard 310 – Part A		60°F (16°C)
UltraGard 310 – Part B		78°F (26°C)
Thinner 103		45°F ( 7°C)
Thinner 106		105°F (41°C)

COLORS Wide color selection. Custom colors on request.

SHELF LIFE Twelve (12) months from date of shipment. **KEEP AWAY FROM MOISTURE.**

**CAUTION** **FOR INDUSTRIAL USE ONLY! FLAMMABLE!** Contains petroleum distillates. **DO NOT USE NEAR HEAT, SPARKS, OR FLAMES.** Close container after use.

**SAFETY** Refer to Material Safety Data Sheet supplied with each order.

**FIRST AID** Refer to Material Safety Data Sheet supplied with each order.