



# ALIPHATIC ACRYLIC URETHANE SEMI-GLOSS V510

## Features

- Resistant to hydraulic fluid
- Outstanding UV protection
- High chemical and abrasion resistance
- Suitable for use in USDA inspected facilities
- Excellent anti-graffiti coating

## Recommended For

Properly Prepared and Primed Steel, Iron, Non-Ferrous, Concrete, and Fiberglass. Ideal for Food and Beverage Processing, Industrial Maintenance, Paper and Pulp Processing, Transportation, Industrial Flooring, General Metal Finishing / Fabrication, Chemical Processing, Commercial Structures, Tank Exteriors and other areas requiring a long life, performance urethane.

## General Description

Aliphatic Acrylic Urethane is a multi-use, two-component urethane appropriate for use on both metal and masonry. This product provides excellent gloss and color retention when used on exterior surfaces exposed to sunlight and rain, and the highly cross-linked formula provides superior abrasion, chemical, and solvent resistance. Due to these outstanding features, urethanes are often used as the final layer in a multi-layer system on steel or masonry. **This is a two component product that requires 4 parts of the proper "A" component mixed with 1 part of part "B" catalyst. The components are already premeasured to the proper mix ratio. No measuring required. Do not mix partial kits.**

## Limitations

- Do not apply if air or surface temperatures are below 50 °F (10 °C) or above 100 °F (37.7 °C) or in relative humidity levels greater than 85%.
- This product is not for immersion service.
- Coated surfaces may discolor under tires due to plasticizer migration.

## Product Information

### Colors — Standard:

Tintable White (86)

### — Tint Bases:

Tintable White (86), Deep Base (87), Clear Base (88)

Tint With Industrial Colorants Only

### — Special Colors:

Contact your retailer.

### Certification & Qualifications:

The products supported by this data sheet contain a maximum of 340 grams per liter VOC / VOS (2.83 lbs. /gal.) excluding water & exempt solvents.

Master Painters Institute MPI # 83 & 174

Meets the Performance Requirements of Mil-C-85285

Suitable for Use in USDA Inspected Facilities

VOC REGION	COMPLIANT
FEDERAL	YES
OTC	YES
OTCII	NO
CARB	NO
CARB07	NO
UTAH	NO
AZMC	YES
SCAQMD	NO

### Technical Assistance:

Available through your local authorized independent Benjamin Moore retailer. For the location of the retailer nearest you, call 1-866-708-9180 or visit [www.benjaminmoore.com](http://www.benjaminmoore.com)

### Technical Data

Generic Type	Aliphatic Acrylic Urethane	
Pigment Type	Titanium Dioxide	
Volume Solids (mixed as recommended)	61 ± 1.0%	
Coverage per Gallon at		
Recommended Film Thickness	350 - 500 Sq. Ft.	
Recommended	– Wet	3.2 - 4.6 mils
Film Thickness	– Dry	2.0 - 2.8 mils
Depending on surface texture and porosity. Be sure to estimate the right amount of paint for the job. This will ensure color uniformity and minimize the disposal of excess paint.		
Dry Time @ 77 °F	– To Touch	2 Hours
@ 50% RH	– To Recoat	8 – 72 Hours
	– Full Cure	24 – 48 Hours
*If top coat is not applied within 72 hours abrade the surface to ensure proper inter-coat adhesion. Maximum abrasion and chemical resistance are achieved at full cure; care should be taken to prevent damage to the coating during the curing process. High humidity and cool temperatures will result in longer dry, recoat and cure times.		
Dries By	Chemical Cure	
Dry Heat Resistance	200°F	
Viscosity @ 77 °F (mixed as recommended)	70 – 80 KU	
Flash Point	80 °F (TT-P-141, Method 4293)	
Gloss/Sheen	Semi-Gloss (55 – 65 @ 60°)	
Surface Temperature	– Min.	50 °F
at application	– Max.	100 °F
Surface must be dry and at least 5° above the dew point		
Thin With	Do Not Thin	
Clean Up Thinner	Corotech® V700 Urethane Reducer	
Mixed Ratio (by volume)	4 : 1	
Induction time @ 70 °F (21 °C)	15 Minutes	
Pot Life @ 77 °F (25 °C)	3 – 4 Hours	
Weight Per Gallon (mixed as recommended)	10.6 lbs.	
Storage Temperature	– Min.	40 °F
	– Max.	90 °F

### Volatile Organic Compounds (VOC)

302 Grams / Liter\* 2.52 LBS / Gallon\*

\* Catalyzed

◇ Reported values are for Tintable White. Contact retailer for values of other bases or colors.

## Aliphatic Acrylic Urethane Semi-Gloss V510

### Surface Preparation

The performance of this product is directly dependent upon the degree of surface preparation employed. Removal of all contaminants should be completed in accordance with SSPC-SP 1 using Corotech® V600 Oil & Grease Emulsifier followed by specific preparation methods as indicated on primer data sheets. Rust and mill scale must be removed from carbon steel and iron substrates as outlined on specific primer data sheets. Surface to be coated must be clean, sound and dry. Fresh concrete must age at least thirty days before coating. All oil, grease, release agents, curing compounds, concrete hardeners, laitance and other contaminants must be removed before coating.

#### NEW SURFACES

**Steel:** Blast selection and choice of primer will be dependent on the severity of exposure and degree of protection required. Maximum protection will be attained using an SSPC- SP 10 Near White Metal Blast followed by 1 coat of Corotech® V150 Epoxy Primer or V160 Epoxy Mastic and 1 or 2 coats of Corotech® V510 Aliphatic Acrylic Urethane. Please contact your Corotech® representative or technical service for recommendations on less severe applications.

**Concrete:** All masonry surfaces must be allowed to cure a minimum of 30 days before painting. Acid etch or abrasive blast all slick, glazed concrete or concrete with laitance. For acid etching, follow all manufacturer directions and safety instructions. Corotech® V620 Concrete Etch is recommended. Rinse and neutralize thoroughly and allow to dry. Prime concrete with 1 coat Corotech® V155 Epoxy Pre-Primer followed by 1 coat of Corotech® V400 Polyamide Epoxy and a topcoat of Corotech® V510 Aliphatic Acrylic Urethane.

**Galvanized and Non Ferrous Metals:** Solvent clean all surfaces. Apply 1 coat of Corotech® V110 Acrylic Metal Primer or Corotech® V175 Waterborne Bonding Primer. Can also use most epoxy primer and intermediate coatings.

**Previously Painted Surface:** Can be applied over old thermoset finishes in good condition. Test patches are recommended to check for wrinkling or lifting of existing coatings. If lifting occurs, Corotech® V155 Pre-Primer may be used over all existing coatings as a barrier coat.

**Fiberglass:** Can be applied directly to clean, previously unpainted fiberglass. Scuff sand fiberglass to promote better adhesion.

**WARNING!** If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Informational Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead).

### Application

Mix the "A" and "B" components thoroughly before mixing together. The use of a drill mixer at low speed will best accomplish this task. Add the full contents of the quart size "B" component to the "A" and thoroughly mix the two together. Allow 15 minutes @ 77 °F induction or "sweat-in" time (@ 77 °F) prior to applying the mixed product to the substrate. Do not apply Corotech® Aliphatic Acrylic Urethane if air or surface temperatures are below 50 °F or above 100 °F, or in relative humidity levels greater than 85%, or if surface or air temperatures are within 5 degrees of the dew point. Product should be allowed to dry tack free prior to air or surface temperatures being within 5 degrees of the dew point.

This product is formulated to be applied without thinning. If needed for application consistency, up to 2 ounces per gallon of Corotech® V700 Urethane Reducer may be added according to local regulations. Do not use VM&P Naphtha to thin this product.

Where non-skid characteristics are desired, hand broadcast an appropriate anti-slip aggregate into the wet film then back-roll to encapsulate. Benjamin Moore's Corotech® Anti-Slip Aggregate V630 works well for non-clear coats.

**Airless Spray (Preferred Method):** Tip range between .013 and .017. Total fluid output pressure at tip should not be less than 2400 psi.

**Air Spray (Pressure Pot):** DeVilbiss MBC or JGA gun, with 704 or 765 air cap and Fluid Tip E.

**NOTE:** Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with recommended thinner. If material begins gelling, immediately flush equipment as product has reached pot life.

**Brush:** Natural Bristle only. Use up to 1 pint per gallon High Flash Naphtha to increase open time.

**Roller:** Industrial Cover with Phenolic core and a nap size of ¼" to ½".

TEST DATA	
Flexibility (ASTM D1737)	Pass ¼" Mandrel
Dry Heat Resistance	200 °F
Wet Heat Resistance	125 °F
Adhesion (ASTM D3359)	Pass 5B
Accelerated Weathering (ASTM G53) 1000 Hours 1 coat V150 Primer, 2 coats V510	95% Gloss Retention < 0.25 DE Color Change (CMC)
Salt Fog Resistance (ASTM B117) 2000 Hours (Same system as above)	Rust Breakthrough: 10 Rating Rust Area: 0.01%
Abrasion Resistance (ASTM D4060) Taber (CS-10 Wheel, 1000g load, 1000 cycles)	80 mg. loss

CHEMICAL RESISTANCE GUIDE (NON-IMMERSION)	
Fresh Water	Excellent
Salt Water	Excellent
Acids	Excellent
Alkalis	Excellent
Solvents	Excellent
Fuel	Excellent
Acidic Salt Solutions	Excellent
Alkaline Salt Solutions	Excellent
Neutral Salt Solutions	Excellent

SYSTEMS RECOMMENDATIONS	
PRIMERS	
Ferrous Metal (Blasted)	V150 Line, V155-00 or V160 Line
Ferrous Metal (Marginally Prepared)	V155-00 or V160 Line
Non-Ferrous Metal	V110 Line or V175-00
Concrete	V155-00, V160 Line, V163-01, or V400-00 Clear
Aged coatings	Use Direct (Check Compatibility) or use V110 Line or V155-00 as a barrier Coat
COMPATIBLE INTERMEDIATES	
V160 Line, V163-01	
For substrates other than listed above, or for usage in severe environmental conditions, please consult with Corotech® Technical Service.	

## Aliphatic Acrylic Urethane Semi-Gloss V510

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### Clean Up

Clean up with Corotech® V700 Urethane Reducer.

### Environmental Health & Safety Information

#### DANGER!

#### Harmful if inhaled

**May cause allergy or asthma symptoms or breathing difficulties if inhaled**

**May cause an allergic skin reaction**

**Suspected of causing cancer**

**May cause respiratory irritation. May cause drowsiness or dizziness**

**May cause damage to organs through prolonged or repeated exposure**

**Highly flammable liquid and vapor**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/ mist/ vapors/ spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Keep away from heat/sparks/open flames/hot surfaces, no smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/ protective clothing/eye protection/face protection. Keep cool.

**Response:** If exposed or concerned get medical attention. If skin irritation or rash occurs get medical attention. Wash contaminated clothing before reuse. If on skin (or hair) take off immediately all contaminated clothing. Rinse skin with water. If inhaled remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. In case of fire use CO2, dry chemical, or foam for extinction.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal:** Dispose of contents/container to an approved waste disposal plant.

**IMPORTANT:** Designed to be mixed with other components. Mixture will have hazards of all components. Before opening packages, read all warning labels. Follow all precautions.

**CAUTION:** All floor coatings may become slippery when wet. Where non-skid characteristics are desired, use an appropriate anti-slip aggregate.



**WARNING** Cancer and Reproductive Harm—  
[www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)

This document represents hazards of the product referenced above. Refer to the individual Safety Data Sheet for hazards of the specific product you will be using.

**KEEP OUT OF REACH OF CHILDREN  
FOR PROFESSIONAL USE ONLY**

**Refer to Safety Data Sheet for  
additional health and safety information.**