



ACRYLIC EPOXY V450

Features

- Waterborne acrylic epoxy
- Durability of a traditional epoxy with water clean-up
- Minimal surface prep
- Scrubbable, abrasion resistant coating
- Easy application and clean-up

Recommended For

Properly Prepared and/or Primed Steel, Iron, Concrete, Non-Ferrous Metals, & Drywall. Designed for use over a wide range of intact aged coatings. Use in mild industrial and institutional maintenance applications, coastal structures, food and beverage plants, offshore atmospheric service, walls, equipment, structural steel and light chemical duty.

General Description

Acrylic Epoxy is a two-component epoxy that can be applied over slightly damp surfaces. For use on properly prepared interior & exterior ferrous metal, galvanized metal, wood, plaster, masonry and drywall surfaces that are subject to moderate abrasion or mild chemical exposures. Not recommended as a heavy-duty floor finish. **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 material, substrate or ambient temperature is below 50 °F (10 °C). Relative humidity should be below 90%.
- Not designed for immersion service or as a heavy duty floor finish.
- Will not cure at surface temperatures below 50 °F (10 °C).

Product Information

Colors — Standard:

Clear (00), White (01)

— Tint Bases:

Pastel Base (85), Tint Base (86), Deep Base (87), Clear Base (88).

Tint with Universal Colorants Only

TINT ONLY THE "A" COMPONENT

— Special Colors:

Contact your retailer.

Certification & Qualifications:

The products supported by this data sheet contain a maximum of 250 grams per liter VOC / VOS (2.09 lbs. /gal.) excluding water & exempt solvents.

CDPH v1 Emission Certified

VOC REGION	COMPLIANT
FEDERAL	YES
OTC	YES
OTCII	YES
CARB	YES
CARB07	YES
UTAH	YES
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

Technical Data◇		White
Generic Type	Acrylic Epoxy	
Pigment Type	Titanium Dioxide	
Volume Solids (mixed as recommended)	32% ± 1.0%	
Coverage per Gallon at		
Recommended Film Thickness	400 – 500 Sq. Ft.	
Recommended Film Thickness	– Wet	3.2 – 4.0 mils
	– Dry	1.0 – 1.3 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 (25 °C) @ 50% RH	– To Touch	1 Hour
	– To Recoat	4 Hours*
	– Full Cure	7 Days
*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	225 °F	
Viscosity @ 77°F (mixed as recommended)	80 – 90 KU	
Flash Point	200°F (TT-P-141, Method 4293)	
Gloss/Sheen	Gloss (75 - 85 @ 60°) Semi-Gloss (45 - 55 @ 60°)	
Surface Temperature at application	– Min.	50 °F
	– Max.	100 °F
Surface must be dry and at least 5° above the dew point		
Thin With	Clean Water	
Clean Up Thinner	Warm, Soapy Water	
Mixed Ratio (by volume)	4 : 1	
Induction time @ 70 °F (21 °C)	30 Minutes	
Pot Life @ 77 °F (25 °C)	6 Hours	
Weight Per Gallon (mixed as recommended)	10.3 lbs.	
Storage Temperature	– Min.	45 °F
	– Max.	95 °F
Volatile Organic Compounds (VOC)		
168 Grams / Liter* 1.40 lbs. / Gallon*		
* Catalyzed		

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

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Surface Preparation

All surfaces must be sound, dry, clean and free of oil, grease, dirt, mildew, mill scale, form release agents, curing compounds, loose and flaking paint and other surface contaminants scrub using V600 Oil & Grease Emulsifier.

NEW SURFACES: Concrete and Masonry: 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's directions and safety instructions. Rinse thoroughly and allow to dry. Prime concrete with one coat of V155 100% Solid Epoxy Pre-Primer or V156 Moisture Tolerant Epoxy.

Steel and Ferrous Metals: The use of Corotech® V110 Acrylic Metal Primer or V175 Waterborne Bonding Primer is recommended. All primers provide maximum performance over near white metal blasted surfaces (SSPC-SP 10). There are however, situations and cost considerations that may prevent this type of surface preparation from being done. Corotech® Industrial Coatings have been designed to provide protection over less than ideal surfaces. The recommended standard is a commercial blast (SSPC-SP 6). The steel profile after the blast should be 1-2 mils and be jagged in nature. Surfaces must be free of grit dust. The coating should be applied as soon as possible after the blast in order to prevent flash rusting or surface contamination. Hand tool cleaning (SSPC-SP 2) or power tool cleaning (SSPC-SP 3) can be used if blasting is not possible. In areas where adequate surface preparation is not possible the use of V155 100% Solid Epoxy Pre-Primer is recommended. In highly corrosive areas where additional rust inhibitive qualities are required, prime with one coat of V170 Organic Zinc-Rich Primer prior to applying epoxy coatings.

Galvanized and Non-Ferrous Metals: Solvent clean all surfaces [SSPC-SP 1]. Apply one coat of Corotech® V110 Acrylic Metal Primer or V175 Waterborne Bonding Primer.

Drywall: Insure drywall is dust & chalk free. Prime with an acrylic drywall primer

Previously Painted Surfaces: Can be applied over most existing industrial finishes in good condition.

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.

Application

Mixing Instructions:

This is a two component kit and is pre-proportioned for error free mixing. DO NOT vary from these instructions. Mix "A" & "B" separately

- Carefully empty the entire contents of V 450-90 (or V450-91) catalyst into the can of V450-Part A component resin; scrape the sides of the pail of Part B to make sure all liquid has been added. Part A container is oversized to completely accept entire contents of Part B material.
- Using a jiffy mixer at low speed, blend this mixture for three to five minutes until completely blended. Keep the mixing blade turning at a slow speed to minimize whipping air into material. Scrape sides of pail during the mixing process.
- Care must be taken to assure both components are completely mixed in order to avoid partially cured spots in the coating.
- Allow to induct for 30 minutes.

It is extremely important to remember that Epoxy Coatings have a limited pot life; therefore, it is wise to make sure sufficient manpower and correct application tools are in order prior to starting the mixing sequence.

Application:

Airless Spray (Preferred Method): Tip range between .015 and .021. 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.

Brush: Synthetic Bristle only. / **Roller:** Industrial Cover with Phenolic core. ¼" – ½" nap.

NOTE: Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with warm water. No reduction is necessary. Do not apply if material, substrate or ambient temperature is below 50 °F (10 °C). Relative humidity should be below 90%. Do not apply if within 5 degrees of dew point or if rain is expected within 12 hours of application.

Coverage: Theoretical coverage at 2 mils dry is 370 square feet per gallon. Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements. Actual spread rate will vary based upon numerous factors, including texture of the substrate, application method, waste, surface porosity and thinning. The Theoretical Spread Rate listed on this document has not been taken into account these factors and is only based upon the volume solids of this product and the recommended wet film thickness when applied to a smooth substrate.

Drying Time: Dries tack free in 1 hour. Can be recoated in 4 hours. This dry time is based on 70 °F and 50% relative humidity. Lower temperature and/or higher humidity will result in longer dry times.

NOTE: If more than 72 hours (@ 77 °F) elapses between coats, sand the film to provide sufficient profile.

Additional Notes: 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. All epoxy coatings will chalk and fade if applied on exterior surfaces subjected to direct sunlight. All epoxies tend to yellow. Where color and gloss retention is important top-coating will be necessary. Will stain with prolonged exposure to some solvents and chemicals or in kennels if exposed to animal waste. This staining will not affect the durability or protective qualities of the coating. Will not cure at surface temperatures below 50 °F.

TEST DATA	
Flexibility (ASTM D1737)	Pass 1/8" Mandrel
Steam Resistance	Yes
Dry Heat Resistance	225 °F
Wet Heat Resistance	150 °F
Adhesion (ASTM D3359)	Pass 5B
Pencil Hardness (ASTM D3363)	H
Direct Impact (ASTM G14)	100 in-lbs.
Reverse Impact Resistance	80 in/lbs.
Accelerated Weathering (ASTM G53)	500 hours, no change
Abrasion Resistance (ASTM D4060) CS-10 Wheel, 1000mg load	150 mg loss after 1000 cycles
Humidity (ASTM D4585) 2 coats over V110 primer (10000 Hours)	Face corrosion: None Face Blistering: None
Salt Spray (ASTM B111(2 Coats over V110 (1000 Hours)	Face Corrosion: None Face Blistering: None

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

SYSTEMS RECOMMENDATIONS	
PRIMERS	
Ferrous Metal (Blasted)	V110 Line, V150 Line, V155-00 or V160 Line
Ferrous Metal (Marginally Prepared)	V155-00 or V160 Line
Non-Ferrous Metal	V110 Line, V125 Line or V175-00
Concrete	48-11, V450-00, V110 Line, V114-01, V155-00, V160 Line, V163-01, or V400-00 Clear
Aged coatings	Use Direct (Check Compatibility) or use V110 Line 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.	

Clean Up

Clean-up with warm, soapy water.

Environmental Health & Safety Information

Warning!

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

Suspected of damaging fertility or the unborn child

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Avoid breathing dust/fume/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response: If exposed or concerned get medical attention. If in eyes rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical attention. If on skin wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs get medical attention.

Storage: 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.



WARNING Cancer and Reproductive Harm—
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
PROTECT FROM FREEZING
FOR PROFESSIONAL USE ONLY**

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