VC-3185 POLYASPARTIC

VC-3185 EXTREME HEAT: HI-PERFORMANCE POLYASPARTIC

TECHNICAL DATA SHEET (TDS)

Description

VC-3185 is a two-component, slow curing, low odor, polyaspartic coating system designed as a decorative yet durable coating for commercial and industrial flooring. Formulated with aliphatic chemistry, VC-3185 is color stable allowing it to take UV exposure without color shifts seen with other coating systems such as epoxies. VC-3185 is a 1:1 mix ratio system with sufficient pot life to be rolled, brushed, or sprayed . It has a robust application window with ability to apply at low temperatures and high humidity.

Primary Applications

Vital Coat VC-3185 is an excellent choice for many applications.

- Marine Protection
- UV-stable top coat
- Low temperature equipment
- Offshore platforms
- Car washes or wash bays
- Secondary containment
- Bridges
- Aircraft hangar floor
- Maintenance facilities
- Industrial shop floors
- Wastewater Treatment Applications
- Cooling Towers

Features/Benefits

- Lower odor than most polyaspartics
- Cures at temperatures just above freezing
- Excellent color stability
- Excellent UV resistance, non yellowing
- Can be applied below -20°F (-28.9°C). Will cure with special handling
- Achieve a variety of colors, patterns, and logos, using decorative flakes, particles, or signs
- High Gloss Characteristics
- Excellent abrasion and impact resistance
- Resistant to hot tire peel
- High build capability in lifts of 10 – 12 mils maximum
- Excellent chemical resistance, resistant to skydrol
- Tolerant to 300°F (149°C) for random, incidental heat contact
- Bonds to virtually all substrates of any dimension, including metals, concrete, and fiberglass
- VOC compliant in all 50 States and Canada

Technical Information

Property		Result
Mix Ratio, By Volume		A:B = 1:1
Mix Ratio, By Weight		A:B = 100:110
Pot Life (16oz)		60 minutes @77° (25 C°)
Volume Solids % By Weight		Part A:100% (85% Catalyzed) - Part B: 69% (85% Catalyzed)
Density (KG/L)		Part A:1.06 - Part B: 1.15 - Mixed: 1.11
Tack Free Time @77°F 50% RH		1-2 Hours
VOC Content		100 g/L
Flash Point		>212°F
Dry to Touch		2 hours
Min/Max Re-Coat Time		2 to 8 hours

Properties

Property	Result
Abrasion resistance, ASTM D4060 Taber wheel/1000G (2.2LBS) / 1000 Cycles	9 mg loss
Adhesion, ASTM D4541	Concrete-primer: 550 psi (substrate ruptures)
Water Absorption, ASTM D570	0.20%
Water Vapor Transmission, ASTM E96	Water procedure B Film 0.01cm (0.004"):1 perm
Hardness (Shore D), ASTM D2240	57-60
Flexibility, 1/8" Mandrel, ASTM D1737	Pass
Falling Sand Abrasion Resistance (L Sand/1 Dry Mil), ASTM D968	45
Viscosity @ 77°F (25°C)	Part A:350-450 CPS - Part B:75-100 CPS - Mix: 125-225 CPS
Gloss, ASTM D523	95+
Fire Rating Can/ULC S102	Estimated on Similar Coating
Flame Spread	5
Smoke Developed	94
Tensile Strength, ASTM D638	6500-7500 psi
Compressive Strength (PSI MPA), ASTM D695	9500
*W/Quartz	13700
*W/Chips	12200
Elongation at Break, ASTM D638	100%
Tear Strength (PLI), ASTM D2240	350

Note Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity. High temp or humidity cause faster cure.*

Packaging

This product is available in 2 US gal (7.57L) or 10 US gal (37.8)

Coverage/Thickness

	PRIMER	FINISH COAT
Recommended Thickness	8 Mils	Over Solid Color: 6 mils Over vinyl chips: 12 mils
Coverage@Recommended Thickness	200 ft²/gal	Over Solid Color: 266 ft²/gal Over vinyl chips: 140 ft²/gal

Note* The indicated coverage is calculated for flat surfaces. A porous surface will require more material in order to cover the same area.

Shelf Life

This product has a shelf life of up to one year in its original, sealed, unopened container. If product appears to be hardened or separated contact Vital Coat before use. Keep away from extreme cold, heat or moisture. Keep out of direct sunlight and away from fire hazards.

Directions for Use

Surface Preparation: Surfaces must be dry, structurally sound, free of dust, dirt, and all other contaminants.

Old Concrete – Concrete surface must be clean, sand blasting, diamond grinder w//30 grit or coarse, or water blasting is highly recommended to remove surface contaminates. Any oils or fats must be removed prior to product application. Acid etching may be required (followed by a thorough rinsing) to open the pores of the concrete to accept a primer. Do not apply to wet substrates. Chloride, moisture, and pH levels should be checked prior to application. In almost every application, a primer is recommended prior to use of VC-3185

New Concrete – The concrete should be allowed to cure for a minimum of 30 days. Compression resistance of concrete must be at least 25 MPa (3625 lbs./square inch) after 28 days and traction resistance must be at least 1.5 MPa (218 lbs./sq. inch). Sand blasting, diamond grinder w/30 grit or coarser or acid etching (followed by a thorough rinsing) is required to remove the surface laitance that appeared during the curing process. A primer should be used to reduce out-gassing and promote adhesion.

Mixing:

Mix 1 part "A" to 1 part "B" into a clean pail using a Jiffy-type mixer carefully to not entrain air or moisture into the mix. Move mixer around in pail for 2 minutes to ensure proper mix of the "A" and "B" components. Only mix as much product as can be placed within 20 to 30 minutes of mixing depending on temperature. No induction time similar to epoxy mixtures is required prior to use. If media agents are to be incorporated, they are to be added after thoroughly mixing A and B. WARNING: Large masses of mixed and/or heated material will have a shorter pot-life. Do not apply in direct sunlight when temperatures and humidity are high.

Application:

Apply with either a ¼", 3/8" nap roller or squeegee making sure the product does not puddle. Make sure to back roll in opposite direction for uniform product application. Small chip brushes or 6 – 8" wall edgers may be used along the perimeter and in more difficult to reach areas. Avoid creating puddles.

Overlaps:

Subsequent overlaps must be applied when primer is still wet or tacky. If primer has dried, reprime. Porous substrates may require
multiple priming.

Drying/Cure Times

Tack-Free	1-2 Hours
Recoat Time	2 Hours
Foot Traffic	2-4 Hours
Heavy Equipment Traffic	24 Hours
Full Cure	24 Hours

Note Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.*

Curing: Do not touch treated surface during curing. Do not add water or allow water to come in contact while curing. Protect surface from debris coming in contact with surface while drying.

Clean-up

Clean all application equipment with a specified cleaner. Once the material hardens, it can only be removed mechanically. If the product splatters, wash thoroughly with hot soapy water.

Precautions/Limitations

Before handling, consult the Safety Data Sheet and Container Labels for physical and health hazard information.
Minimum/Maximum temperature of substrate: 42 degrees F/ 86 degrees F (5 degrees C/30 degrees C)
Maximum relative humidity during application and curing: 85%
Substrate temperature must be 5.5 degrees F above dew point measured
Humidity content of substrate must be <4% when coating is applied
Do not apply on porous surfaces where a transfer of humidity may occur during application
Protect from humidity, condensation and contact with water during the 24 hour initial curing period.

Chemical Resistance

Acetic Acid 100%	C	NACL/Water 10%	R
Acetone	C	Nitric Acid 20%	NR
Ammonium Hydroxide 50%	RC	Phosphoric Acid 10%	R
Benzene	C	Phosphoric Acid 10%	NR
Brine Saturated Water	R	Potassium Hydroxide 10%	R
Water Chlorinated	R	Potassium Hydroxide 20%	R, DIS
Clorox (10%) Water	R	Propylene Carbonate	RC
Diesel Fuel	RC	Skydrol	C
Gasoline	RC	Sodium Hydroxide 25%	R
Gasoline/5% MTBE	RC	Sodium Hydroxide 50%	R, DIS
Gasoline/5% Methanol	RC	Sodium Hypochlorite 10%	R
Hydrochloric Acid 20%	R	Sodium Bicarbonate	R
Hydrochloric Acid 10%	NR	Stearic Acid	R
Hydraulic Fluid (Oil)	RC	Sugar Water	R
Isopropyl Alcohol	R	Sulfuric Acid 10%	R
Lactic Acid	RC	Sulfuric Acid >50%	RC
MEK	RC	Toluene	R
Methanol	R	1,1 ,1 -Trichloroethane	C
Methylene Chloride	C	Trisodium Phosphate	R
Mineral Spirits	RC	Vinegar/Water 5%	R
Motor Oil	R	Water	R
MTBE	C	Water: 14 days @ 179.6°F	R
Muriatic Acid 10%	R	Xylene	RC

R	=	Recommended/little or no visible damage
RC	=	Recommended conditional/some effect, swelling or discoloration
C	=	Conditional/Cracking - wash within one hour of spillage to avoid affects
NR	=	Not Recommended
DIS	=	Discolorative

Health and Safety

Always wear proper safety equipment to protect eyes and skin. Keep a neat, clean mixing area to avoid potential safety issues. Make sure to read and understand all SDS sheets and become familiar with all application procedures and best practices. Recommended for use by professionals only! In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. For more information, consult the material safety data sheet.

Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Important Notice

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Publish Date 6/23/2020

Revisions

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