

VandlGuard® IsoFree™

Aliphatic Urethane 2K

TECHNICAL DATA SHEET

Zero VOC Water-Based Aliphatic Polyurethane Coating.



VandlGuard® CSI Reference

09 96 23 Finishes

*10 Year Warranty - Apply 1 coat at 2 mils DFT+

Description

VandlGuard® IsoFree™ Aliphatic Urethane 2K is a two-component, high performance, zero-VOC, odorless, water-based, aliphatic polyurethane paint/coating. VandlGuard® IsoFree™ Aliphatic Urethane 2K provides years of excellent protection against harsh weather conditions, UV exposure, corrosion, and graffiti. Additionally, this product has good chemical acid resistance, excellent water resistance, abrasion resistance, flexibility, and is environmentally safe.

What is IsoFree™ Technology?

When Part B is mixed with Part A the crosslink reaction makes the combined product, free of any isocyanates. Thereby the product is safe to apply for both the applicator and the environment.

Recommended Uses:

- Graffiti protection applications
- Non-yellowing topcoat, UV resistant applications
- Direct-to-metal* and concrete applications
- Chemical and acid resistant applications

Features & Benefits

- Highly Graffiti Resistant
- No VOC's due to its total water-based formulation
- Outdoor weathering, passes 10,000+ cycles
- Passes 160+ recleanability cycles
- Cure time, 3 to 7 days
- Non-flammable

Coverage Rate by Substrate (theoretical)

The coverage depends on the surface. Test the product on a small area of the substrate to estimate coverage and determine if a second coat is needed.

Substrate	Sq Ft/ Gallon
Textured Surface	Approx. 250 - 300
All Masonry Surfaces	Approx. 300
Painted Surface	Approx. 400
Wood Surface	Approx. 300
Metal	Approx. 400

*Do not use on bare ferrous metal. Only apply to ferrous metal that is properly prepped and primed to receive a water based coating.

Coverage Rate continued...

The use of fluted, scored block, raked joints, sandblasted or etched surfaces will result in greater absorption and lower coverage rates, by up to 40%. Test these areas for the expected coverage rate before general application. Allow for this increased surface area.

Surface Preparation

Prior to application, all surfaces shall be clean and dry with no oils, dirt, debris, or minerals such as efflorescence, lime and calcium. These stains, along with others, will prevent proper penetration of VandlGuard® IsoFree™ to sufficiently seal for the warranty period.

The use of Rainguard's Restore-N-Prep™ Concrete and Masonry Cleaner system is recommended as a pre-treatment to clean masonry surfaces. Once clean, allow the surface to fully dry before sealing or applying a top-coat (See the Restore-N-Prep™ TDS for details).

Restore-N-Prep™ CSI Reference

03 01 40 Concrete Finishes
03 10 30 Concrete Finishes
03 10 50 Concrete Finishes
04 01 20 Unit Masonry
04 01 40 Unit Masonry

Bare Surfaces

First apply 1 coat of Micro-Seal® Water Repellent by Rainguard® (required for warranted applications).

Existing Paint

Apply two coats of VandlGuard® Two-Part Urethane Clear Coat over high quality exterior paint systems for graffiti resistance.

Graffiti Removal

Use of commercially available graffiti removers and solvents are acceptable.

Test Panel

Always apply VandlGuard® Two-Part Urethane onto a mock wall or test panel. Prior to coating previously sealed surfaces, test a small area for adhesion. Test wall or actual surface area to determine acceptable color, surface porosity, application rates and methods before starting general application.



Required Mixing

1. Stir Part A for 2 minutes with a stir stick or a jiffy blade at SLOW speed (500 RPM) to fully disperse the product.
2. Catalyze the product by pouring Part B into Part A and mixing thoroughly for 4-5 minutes, at the same speed as outlined in Step 1 above.
3. Pour a portion of Part A into Part B can until full. Mix well for 30 seconds, and pour back into Part A. Mix for another 2-3 minutes. Allow product to stand for 5 minutes before applying. Loosely cover mixed product. **DO NOT RE-SEAL MIXED PRODUCT.**
4. Product may be reduced with clean water to achieve the desired viscosity. We recommend using distilled water.
5. Typical spray applications require a 5% to 10% reduction for tinted white applications. For clear applications, do not exceed 20%.
6. Do not reduce catalyzed product after 30 minutes.

IMPORTANT:

Mark time to establish pot life. Pot life is 3 hours - 4 hours at 75°F (24° C). Temperature and humidity directly affect pot life and dry time. Do not mix with other products or other containers of RainguardPro IsoFree® Product.

Application Instructions

VandlGuard® IsoFree™ may be sprayed, brushed, or roller applied.

Smooth Surfaces

It can be applied directly over most surfaces without primer. Apply a light coat at a thickness of 3 to 4 wet mils. Do not exceed 5 mils. Reduction may create optimal flow.

Porous Surfaces

Most porous surfaces should have a sealer or filler to adequately eliminate potential pinholes prior to applying VandlGuard® IsoFree™ Aliphatic Urethane 2K.

1. Apply one coat of VandlGuard® IsoFree™ Aliphatic Urethane 2K (3 – 4 mils wet per coat) allowing 4 hours between coats or when coating is tack free.
2. Any runs should be brushed or rolled out immediately before drying.
3. Thickness should be 1.5-2 mils when dry.

IMPORTANT: Proper methods to protect from over spraying should be implemented. Atomized particles will adhere to most surfaces and are extremely difficult to remove. Temperature and humidity directly affect pot life and dry time.

Re-Application

Apply a second coat within 48-hours for proper adhesion. If the first coat has dried longer than 48-hours, abrade the surface to promote adhesion for the second coat.

Precautions

Use material in a well-ventilated area. Protect the work of other trades. Protect shrubbery and other plants with drop cloths. Protect automobiles and all other areas not to be coated from overspray. Remove overspray from any windows, automobiles, metal as soon as possible. Clean spills and leaks in a timely manner to prevent staining.

All surfaces to be coated should be clean of any dirt and grime, efflorescence, lime run, form oils and release agents, grease, mud, excess mortar, and mold and mildew, etc. All cracks should be pointed or caulked. All voids, beeholes, masonry surface defects and openings such as conduits, pipes, drains, door frames, vents, air conditioner openings, electrical openings, control joints, or any dissimilar materials should be repaired using urethane or other approved patching. If an acid etch or an acid stain has been applied to the surface, it must be thoroughly flushed to remove all residue and then allow to dry.

Do not apply on damp or moist surface as it will whiten and may cause delamination. Do not apply to surfaces if moisture content is greater than 25% as measured with an electronic moisture meter. Do not apply product in climates where freezing temperatures have existed prior to application. Allow adequate time for surfaces to thaw. Establish that air, surface, and material temperatures are above 40°F (4.4°C) and at least 5°F above the dew point prior to painting. Do not apply in temperatures below 40°F or above 100°F. Do not apply if rain, snow, or lower temperatures are expected within 48 hours. Do not apply if relative humidity is greater than 80%.

Horizontal coated surfaces can become slippery when wet.

NOTE: MORE IS NOT BETTER! A heavier application can cause micro blistering and affect the finish.

Safe Handling

Materials shall be delivered in the original sealed containers, clearly marked with manufacturers name and type of material.

The recommended storage temperature is approximately 22 °C (72 °F). Do not damage containers. Store in a dry place. Do not store for extended periods in direct sunlight. Protect containers from resin and moisture contamination.



Technical Data

Solid by Weight (%)	Clear/Matte 52 (±2%)/58% Pigmented 58 (±2%)/64%
Solid by Volume (%)	50%
Dry Time	4 – 8 hours
Cure Time	3 – 7 days
Pounds Per Gallon	Part A 9.2 lbs/gallon Part B Clear/Matte 8.7 lbs/gallon

Test Data

TEST	RESULTS	TEST METHOD
Flash Point	>118°C (245 °F)	Tag closed cup
pH	Part A - N/A Part B - 9.2	--
Specific Gravity	1.05	--
Gloss	> 90 @ 16 °C (60°F)	Gloss meter
Gloss Loss	< 10%	ASTM D523
Color Loss	< 1.1%	ASTM D2244
Salt Spray	8,000+ hours	ASTM B117
Humidity	8,000+ hours	ASTM D2244
Abrasion	< 40mg	ASTM D4060
Hardness	> 2H	ASTM D3363
Adhesion	Pass	ASTM D2197
Flexibility	Pass	ASTM D2794
Surface Burning	Flame Spread 0 Smoke Development 0	ASTM E84
Odor	None	--
VOC (g/L, less water)	0	--
	Passed Level 10	ASTM D6578/D6578M-13
	Passed Level 1	ASTM D7089-06
Recleanability Cycles	160+	
Set-To-Touch	4 hours @ 77°F	ASTM D 1640
Dry-Through Time	4 hours @ 77°F	ASTM D 1640
MEK Double Rub	No blistering, peeling, softening or gloss loss (500+ cycles)	ASTM-D 1308
Outdoor Weathering	10,000+ hours	ASTM G155-05A
Cyclic Weathering	No blistering, peeling, softening or gloss loss	AASHTOR-31



Chemical Resistance

VandlGuard® IsoFree™ Aliphatic Urethane 2K provides excellent resistance to a wide range of chemicals and acids, including:

Ammonium Hydroxide	Hyjet #3	Toluene & Xylene
Potassium Hydroxide	Skydrol 500 A & B	Jet Fuel - Butyl Cellusolve
Sodium Hydroxide	Hydrochloric Acid 10%	Acetone - Cellusolve Acetate
Sodium Chloride	Phosphoric Acid 35%	Methyl Ethyl Ketone
Trisodium Phosphate	Sulfuric Acid 20%	Beer - Cola - Milk
Ethyl Alcohol	Acetic Acid 24%	Mustard - Bleach
Isopropyl Alcohol	Trichlorethylene	-
Methyl Alcohol	Perchlorethylene	-

Warranties

Rainguard Brands, LLC guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. Rainguard Brands, LLC makes no other warranty, expressed or implied, and all warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product. Manufacturer shall not be liable for material used outside of its shelf life. For product dating, please refer to the batch number on the product or contact Rainguard Brands, LLC.

Surface conditions and application variables are out of the control of Rainguard Brands, LLC. As such, the applicator agrees to: Follow recommended application instructions, acknowledge limitations outlined in this technical data sheet, contact the manufacturer in the event there are any uncertainties, perform a test panel to confirm fit and finish before any general application. The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Rainguard Brands assumes no obligation or liability for use of this information. Contact manufacturer at 888-765-7070 before bidding to confirm warranty provisions and procedures.

SELLER'S LIABILITY UNDER THE SALE OF THIS PRODUCT IS LIMITED TO REPLACING DEFECTIVE PRODUCT. HOWEVER, IF SELLERS FAILS IN ITS ATTEMPT TO REPLACE THE DEFECTIVE PRODUCT, BUYER WILL BE ENTITLED TO A REFUND OF MONIES PAID TO SELLER UNDER THIS PRODUCT WARRANTY. SELLER IS NOT LIABLE FOR BUYER'S LOSS OF PROFITS, BUSINESS GOODWILL, OR OTHER CONSEQUENTIAL DAMAGES, DESPITE ANY FAILURE TO REPLACE THE PRODUCT. BUYER HAS ACCEPTED THIS RESTRICTION ON ITS RIGHT TO RECOVER CONSEQUENTIAL DAMAGES AS PART OF ITS BARGAIN WITH SELLER. BUYER REALIZES AND ACKNOWLEDGES THAT THE PRICE OF THE PRODUCT WOULD BE HIGHER IF SELLER WERE REQUIRED TO BE RESPONSIBLE FOR BUYER'S CONSEQUENTIAL DAMAGES."

© 2021 RAINGUARD BRANDS, LLC. All rights reserved.

[END]