

VandlGuard® IsoFree™

Aliphatic Urethane 2K

TECHNICAL DATA SHEET

Zero VOC Water-Based Aliphatic Polyurethane Coating



VandlGuard® IsoFree™

32 Oz Kit	Clear Matte	VG-6001
	Clear Satin	VG-6002
	Clear Gloss	VG-6003
1 Gallon Kit	Clear Matte	VG-7040
	Clear Satin	VG-7041
	Clear Gloss	VG-7042
	White Matte	VG-7043
	White Satin	VG-7044
	White Gloss	VG-7045

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.

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.

Pour the contents of Part B into Part A. After mixing the components well for approximately two (2) minutes, it may be reduced with water up to twenty percent (20%).

This product may be sprayed, brushed, or roller applied. VandlGuard® IsoFree™ Aliphatic Urethane 2K is unique in that it has no VOC's due to its total water-based formulation. When fully cured, this product has good chemical acid resistance, UV protection, excellent water resistance, abrasion resistance, flexibility, and is environmentally safe.

Coverage Rates (Theoretical)

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

Recommended Uses

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

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

Required Mixing

1. Stir Part A for 2 minutes with a stir stick or 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 2 hours - 3 hours at 75°F (24° C). (Continued next page)



Temperature and humidity directly affect pot life and dry time. Environmental conditions should be between 40-95°F (5-35°C), and should not exceed 80%.

Do not mix with other products or other containers of RainGuardPro IsoFree® Product.

Application

SMOOTH SURFACES

VandlGuard® IsoFree™ Aliphatic Urethane 2K may 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. When dry, thickness should be 1.5-2 mils

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. Conditions should be between 40 – 95 °F (5 – 35 °C) and humidity should not exceed 80%.

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.

Test Panel

Always apply material to a mock wall or test panel. Test wall or actual surface area to determine acceptable color, surface porosity, application rates and methods before starting general application.

Clean Up & Disposal

Clean up promptly with mild soap and water before product cures. Dispose of according to local, state and federal regulations.

Graffiti Removal

Use of commercially available graffiti removers and solvents are acceptable.

Limited Warranty

10 Year Warranty - Apply 1 coat at 2 mils DFT+
Fill out warranty pre-application at
RainGuardPro.com

Limitations

- VandlGuard® IsoFree™ Aliphatic Urethane 2K should be tested on all substrates before complete application
- VandlGuard® IsoFree™ Aliphatic Urethane 2K should not be applied in humidity above 80% or rain
- Horizontal surfaces coated with VandlGuard® IsoFree™ Aliphatic Urethane 2K become slippery when wet
- VandlGuard® IsoFree™ Aliphatic Urethane 2K should not be applied in high wind, rain, or when the ambient temperature is below 5 °C (40 °F)
- Certain porous surfaces may require a sealer or block filler to allow the VandlGuard® IsoFree™ Aliphatic Urethane 2K to create a more desirable application and maintain the integrity of the surface. Test patch should be applied before the final application

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

Delivery & Handling

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

STORAGE AND HANDLING: 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.

Personal Protection

VandlGuard® IsoFree™ Aliphatic Urethane 2K is a zero-VOC coating. The volatile to evaporate will be water. Due to its total water-based formulation, the hazard of flammability is removed.

Submittals

When preparing to do a job application, the contractor must submit the following to the project engineer:

- Product literature
- Applied test samples to the substrate
- Proof of contractor's license

SEE PAGE 3 FOR TEST DATA -->



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	1,500+ 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
	No blistering, peeling, softening or gloss loss	ASTM-D 1308

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	-