

Polyurethane HD

Aliphatic Polyurethane 2k

TECHNICAL DATA SHEET

Zero V.O.C. Water-Based Aliphatic Polyurethane Coating



Polyurethane HD CSI Reference

| |
|-----------------------------|
| 03 35 00 Concrete Finishing |
| 04 2 00 Unit Masonry |
| 04 40 00 Unit Masonry |
| 05 05 13 Metal |
| 09 61/96 Finishes |
| 09 96 26 Finishes |
| 09 96 33 Finishes |
| 09 96 35 Finishes |
| 09 90 00 Finishes |
| 09 24/25 Finishes |

*Standard warranty period is 5 years

Description

RainGuardPro® Polyurethane HD Aliphatic Polyurethane 2K is a two-component, high performance, zero VOC, odorless, water-based, aliphatic paint/coating. Polyurethane HD provides years of excellent protection against harsh weather conditions, UV exposure, corrosion, physical damage, and has elastomeric properties. Polyurethane HD acts as a breathable waterproofer.

Recommended Uses

- Warehouses
- Food and Beverage Facilities
- USDA Inspected Facilities*
- Commercial Vehicles
- Airports
- Stadiums
- Sound Walls
- Stadiums
- Direct-To-Metal
- Aluminum & Metal
- Galvanized & Ungalvanized Steel

*Suitable for USDA inspected facilities

Features & Benefits

- Scratch Resistant
- Non-Yellowing & UV Resistant topcoat
- Anti-Carbonation Protection
- Apply Direct-to-Metal* & Concrete
- Chemical & Acid Resistant
- Excellent As A Protective Floor Coating, Or Topcoat Applied Over A Primer Epoxy, As A High-Gloss, Chemical/Acid Resistant Topcoat For Industrial Concrete Flooring Applications
- Breathable Elastomeric Waterproofer

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

Color & Finish

| Color | Finish |
|-------------------------------------|------------|
| Clear | Semi-Gloss |
| | Satin |
| | Gloss |
| White Tint: 4 Oz / Gallon | Semi-Gloss |
| | Satin |
| | Gloss |
| Deep Base Tint: 8 Oz / Gallon | Semi-Gloss |
| | Satin |
| | Gloss |
| Accent Base Tint: 11 Oz / Gallon | Semi-Gloss |
| | Satin |
| | Gloss |

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 when determining material requirements.



Coverage Rate by Substrate (Theoretical)

The coverage depends on the surface. Test the product on a small area of the substrate to estimate coverage. Extremely porous surfaces may require multiple coats.

| Substrate | Sq Ft/ Gallon |
|----------------------|-----------------|
| Textured Surfaces | approx. 250-300 |
| All Masonry Surfaces | approx. 300 |
| Painted Surfaces | approx. 400 |
| Wood Surfaces | approx. 300 |
| Metal | approx. 400 |
| Tile | approx. 350 |

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Test Panel

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

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 Polyurethane HD to sufficiently seal for the warranty period.

The use of RainguardPro'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

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|----------------------------|
| 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 |

Mixing Instructions

1. Stir Part A for 2 minutes with jiffy blade at slow speed (500 RPM) to fully disperse the product.
2. To catalyze the product, pour Part B into Part A and mix for 2 – 3 minutes.
3. Pour a portion of Part A back into Part B container until it's full, mix well for 30 seconds, pour back into Part A. Mix for another 2-3 minutes. Allow the product to stand for 5 minutes before applying. Loosely cover the mixed product. Do not re-seal the mixed product.

IMPORTANT: Mark time to establish pot life. Pot life is 3-4 hours at 75°F. Product should not be mixed with other products or other containers of RainguardPro® Polyurethane HD.

Thinning is recommended to avoid lap marks and allow for proper self-leveling characteristics. Use clean water only.

Application Instructions

SMOOTH SURFACES

RainguardPro® Polyurethane HD may be applied directly over most surfaces without primer. Apply a light coat at a thickness of 3 to 4 wet mils.

POROUS SURFACES

Most porous surfaces should have a sealer or filler to adequately eliminate potential pinholes prior to applying RainguardPro® Polyurethane HD.

1. Apply one coat of RainguardPro® Polyurethane HD (3–4 mils wet per coat). Allow 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*

*For heavy duty applications such as warehouse floors with heavy forklift traffic, DFT thickness should be 3-4 mils.

Dry Time: 45 minutes - 1 hour at 75°F

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 24-hours for proper adhesion. If the first coat has dried longer than 24-hours, abrade the surface to promote adhesion of the second coat.

Precautions

For horizontal applications it is the responsibility of the contractor to use RainguardPro's slip resist or appropriate non-slip additive depending on the project conditions.

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, etc. as soon as possible should it occur. To prevent permanent staining, clean spills or leaks in a timely manner.

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.

Do not apply to surfaces if moisture content is greater than 25% as measured with an electronic moisture meter. Do not apply materials 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 at temperatures below 40°F when temperatures are expected to drop below 40°F within 48 hours of application. Do not apply if rain, snow, or lower temperatures are expected within 48 hours. Do not apply if relative humidity is greater than 90%.

Store materials in a well-protected area at 45°- 90°F. Avoid freezing temperatures, direct sunlight, & moisture. Keep away from heat sources.

Safe Handling

Use product only with adequate ventilation and/or an appropriate cartridge type respirator. Avoid contact with skin and wear protective gloves. Read the Safety Data Sheet before using.

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 | 1500+ hours | ASTM B117 |
| Humidity | 1500+ 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 | -- |
| MEK Double Rub @ 50% solids | Passed 2,000 cycles | -- |



Technical Data

| | | |
|---------------------|--------------------------|------------------------|
| Solid by Weight (%) | Clear/Matte 60 (±2%)/58% | Pigmented 66 (±2%)/64% |
| Solid by Volume (%) | 50% | |
| Dry Time | 45 minutes – 1 hour | |
| Cure Time | 5 – 7 days | |
| Pounds Per Gallon | Part A | 9.2 lbs/gallon |
| | Part B Clear/Matte | 8.7 lbs/gallon |
| | Part B Pigmented | 10.8 lbs/gallon |

Chemical Resistance

RainguardPro® Polyurethane HD 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 Cellosolve |
| Sodium Hydroxide | Hydrochloric Acid 10% | Acetone - Cellosolve 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.”