

Metalithane™ HD

Metallic Aliphatic Polyurethane 2k

TECHNICAL DATA SHEET



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

Metalithane™ HD CSI Reference

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

Metalithane™ HD is a two-component aliphatic urethane available in a wide variety of metallic finishes, including pearl and solid options. It is a high-performance, zero VOC coating that has excellent scratch and chemical resistance for high-end metallic finish uses. It can be applied on a wide variety of substrates and has excellent adhesion to slick surfaces. The standard pearl and solid metallic options are available in a pre-mixed gallon. The metallic flake can be purchased separately and added to create custom effects. A local RainguardPro sales representative can assist with custom effects, drawdowns and color matching when requested.

Recommended Uses

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

**Suitable for USDA inspected facilities*

Features & Benefits

- Pearl and Solid Metallic Effects
- Scratch Resistant
- Non-Yellowing & UV Resistant topcoat
- Anti-Carbonation Protection
- Apply Direct-to-Metal* & Concrete
- Chemical & Acid Resistant

**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-Pearl
	Pearl
	Semi-Solid
	Solid

Custom Metallic Effects

Metallic additives can be purchased separately and mixed into a wide variety of clear coats on the market. custom metallic flake colors are available upon request. Please see Metalithane's™ color chart for custom flake color options. Typical starting points are as follows:

- **Semi-Pearl:** 0.5 ounce per gallon
- **Pearl:** 1 ounces per gallon
- **Semi-Solid:** 2 ounces per gallon
- **Solid:** 4 ounces per gallon

Test Panel

Always apply Metalithane™ 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.



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

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.

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 Metalithane™ 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

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® Metalithane™ HD.

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

Application Instructions

SMOOTH SURFACES

RainguardPro® Metalithane™ 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® Metalithane™ HD.

1. Apply one coat of RainguardPro® Metalithane™ 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, bee-holes, 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® Metalithane™ 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."