ROOFARMOR HD

Two Component Modified Polyurea Protective Coating

DESCRIPTION

Roof Armor - HD is a two component, 1:1 ratio, 100% solids, fast set, liquid applied, modified polyurea liner system for metal, concrete, fiberglass, wood and SPF surfaces.

FEATURES

- Tough and Elastomeric
- Chemical Resistant
- Low Temperature Flexibility
- Abrasion and Impact Resistant
- Seamless
- High Build
- Quick Drying

TYPICAL USES

- Damp Proofing Membrane
- Waterproofing Membrane
- Decking
- Walkways

COLOR

Aluminum

Due to its aromatic composition, Roof Armor - HD will tend to yellow or darken in color and will become flat after exposure to UV light. Roof Armor - HD may be top coated within twelve hours of application with an aliphatic polyurethane/polyurea coating for a colorfast finish.

PACKAGING

10 gallon kit: One 5 gallon pail of Part-A and one 5 gallon pail of Part-B.

100 gallon kit: One 50 gallon drum of Part-A and one 50 gallon drum of Part-B.

COVERAGE

Roof Armor - HD may be applied at any rate to achieve desired thickness. Theoretical coverage for 1 mil thickness = 1 USG / 1600 SF or 50 mil thickness = 3 USG / 100 SF.

SURFACE PREPARATION

In general, coating performance and adhesion are directly proportional to surface preparation. Most failures in the performance of surface coatings can be attributed to poor surface preparation. Polyurea coatings rely on the structural strength of the substrate to which they are applied. All surfaces must be free of dust, dirt, oil, grease, rust, corrosion and other contaminants. When coating substrates previously used, it is important to consider the possibility of substrate absorption, which may affect the adhesion of the coating system, regardless of the surface preparation. Polysource recognizes the potential for unique substrates from one project to another. The following information is for general reference, and for project specific questions, contact Polysource.

New and Old Concrete:

Refer to SSPC-SP13/NACE 6, or ICRI 03732: CSP 3-5. New concrete must be cured for 28 days prior to product application. Surface must be clean, dry, sound and offer sufficient profile for product adhesion. Remove all dust, dirt, oil, form release agents, curing compounds, salts, efflorescence, laitance and other foreign matter by shotblasting and/or suitable chemical means, in accordance with local chemical regulations. Rinse thoroughly, to achieve a pH between 8.0 and 11.0. Allow to dry completely. If old concrete has a surface that has deteriorated to an unacceptably rough surface, Polysource PC-260 self-level or a mixture of Polyprime 21 and sand should be used as a repair agent for cracks, spalls, bug holes and voids. Upon full cure of the repair agent, prime the entire surface intended for coating.

TECHNICAL DATA	
Mix Ratio, by volume	1A : 1B
Pot Life at 150-160°F	3-5 seconds
Tack Free Time (150 mils)	20-40 seconds
Recoat Time	0-12 hours
Viscosity at 77-80°F (25°C), Brookfield:	
Part-A	500-700 cps
Part-B	650-850 cps
Density (Side-A & B Combined)	9.22 lbs/gal
Flash Point	>200°F
Hardness, ASTM D-2240*	85 ± 5 Shore A
Tensile, ASTM D-412&	1700 ± 200 psi
Elongation, ASTM D-412*	325 ± 50%
Tear, ASTM D-624*	225 ± 25 pli
Service Temperature	-20°F to 250°F

(*These physical properties from sample sprayed with Graco Foam Cat 200 @ 2000 psi minimum, with Gusmer GX7-400 mechanical purge gun @ 150-180°F. Different machine and parameter will change these properties. User should perform their own independent testing as properties are approximate.)

Concrete Surface Preparation Reference:

ASTM D4258 - Standard practice for cleaning concrete
ASTM D4259 - Standard practice for abrading concrete
ASTM D4260 - Standard practice for etching concrete
ASTM F1869 - Standard test method for measuring moisture vapor emission rate of concrete
ICRI 03732 - Concrete surface preparation

Wood:

All wood should be clean, dry and free of any knots, splinters, oil, grease or other contaminants. Splintered or rough areas should be sanded. Knots should be repaired using Polysource PC-260 with silica flour. Upon full cure of the repair agent, prime the entire surface intended for coating.

Steel (Atmospheric and Immersion Exposure):

Remove all oil, grease, weld spatters and round off any sharp edges from surface. Minimum surface preparation is Near

White Metal Blast Cleaning per SSPC-SP10/NACE 2. Optimum surface profile is 2-3 mils. Prime and shoot Roof Armor - HD on to any bare metal the same day as it is cleaned to minimize any potential flash rusting.

Aluminum:
Aluminum should be blasted with aluminum oxide or sand, and not with steel or metal grit. Excessive blasting may result in a warped or deformed surface. After blasting, wash aluminum with a commercially available aluminum cleaner. Allow to dry, then prime.

Brass and Copper:
Brass and copper should be blasted with sand, and not with steel or metal grit. Remove all dust and grease prior to applying primer.

Galvanized Surfaces:
Clean and degrease any contaminated surfaces before priming. Do not blast galvanized surfaces with an abrasive grit. An adhesion test is recommended prior to starting the project.

Fiberglass Reinforced Plastic:
The gel coat should be lightly blasted or sanded with 80 grit sandpaper and cleaned.

Plastic Foams:
Enhanced adhesion is obtained when the foam is mechanically abraded. When coating polystyrene, do not use a solvent-based primer.

Textiles, Canvas, Fabrics:
Adhesion to most fabrics, geothermal membranes and textiles does not require a primer.

Stainless Steel:
Stainless steel may be grit blasted and degreased before priming. Some stainless steel alloys are so inert that it is not possible to achieve a satisfactory bond. An adhesion test is recommended prior to starting the project.

New and Old Cast Iron:
Blast with a steel grit and degrease before priming. Old cast iron is difficult to prepare for a satisfactory bond. It can absorb oil and water soluble contaminants that will keep returning to the surface after the coating system has been applied and affect the coating system adhesion. An adhesion test is recommended prior to starting the project.

All Other Surfaces:
An adhesion test is recommended prior to starting the project.

MIXING
Roof Armor - HD may not be diluted under any circumstances. Thoroughly mix Roof Armor - HD Part-B (Resin side) with air driven power equipment until a homogeneous mixture and color is obtained. Maintain gentle mixing throughout entire application process. Ensure chemical is min 75°F before mixing.

APPLICATION
Both Side-A and Side-B materials must be preconditioned to 75-80°F before application.

Recommended surface temperature must be at least 5°F above the dew point.

Roof Armor - HD should be applied using a plural component, heated, high pressure 1:1 mix ratio spray equipment like Graco's Reactor, Glas Craft MX2 or MH3 or other equivalent.

Both Part-A and Part-B materials should be sprayed at a minimum of 2000 psi and at temperatures above 140°F / below 150°F. Adequate pressure and temperature must be maintained at all times.

Roof Armor - HD should be sprayed in smooth, multidirectional (cross hatch) passes to improve uniform thickness and appearance.

STORAGE
Roof Armor - HD has a shelf life of six (6) months from date of manufacture, in factory-sealed containers.

Part-A and Part-B drums are recommended to be stored above 60°F.

Avoid freezing temperatures.

Store drums on wooden pallets to avoid direct contact with the ground.

If stored for a long period of time, rotate Part-A and Part-B drums regularly.

LIMITATIONS
Do not open until ready to use.

Both Part-A and Part-B containers should be fitted with a desiccant device during use.

Health and Safety Information:
Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling any of the products listed above. Before working with these products, it is your responsibility to read and become familiar with the available information on its hazards, proper use and handling. This is extremely important and cannot be overemphasized. Information is available in several forms, e.g. material safety data sheets and product labels. To obtain this information, contact your Polysource Industries representative.