



PolyArmor SLD 5000-FR

TECHNICAL DATA SHEET

PolyArmor SLD 5000-FR is an ASTM E-84 and ASTM E-108 fire rated two-component 100% pure aliphatic elastomeric polyurea. It is a spray applied coating that is flexible, abrasion and impact resistant. PolyArmor SLD 5000-FR is sprayed on vertical or horizontal surfaces and forms a continuous seamless membrane of a desired thickness on concrete, wood, metal and steel. Its quick gel and set time allows for single or multiple applications without appreciable sagging and is relatively insensitive to moisture, allowing application in most temperatures.

FEATURES

- Good Chemical Resistance
- 100% Solids, No VOCs
- USGBC LEED, EQ Credit 4.2: Low-emitting VOC Compliant Materials
- No noxious odors
- Abrasion Resistant at high temperatures
- Resistant to cracking under high flex conditions
- Flexible at low temperatures

RECOMMENDED USES

- Beverage/Food Processing Plants, Cold Storage Facilities
- Amusement Parks
- Planters/Tunnels/Underground Vaults
- Mining
- Pulp and Paper Mills

TECHNICAL DATA

	Units	Values		Test Method
MIX RATIO		1A:1B		
FIRE RATINGS		Class A Class A @ 0.5" Slope		ASTM E-84 ASTM E-108
HARDNESS	Shore D	40-50	Sprayed	ASTM D2240
PERCENT SOLIDS	%	100 (0 g/l VOCs)	Calculated	
TENSILE	psi	1775	Sprayed	ASTM D412
TEAR RESISTANCE, DIE C	Pli	375	Sprayed	ASTM D412
ELONGATION	%	590	Sprayed	ASTM D412
TABER ABRASION	mg/rev. loss	10/1000 140/1000		CS-17 wheel H-18 wheel
GEL TIME / TACK FREE @ 150°F	Sec	4 / 6-9	Sprayed	Thickness/Substrate Temp. Sensitive

NOTE: PHYSICAL PROPERTIES MAY VARY ON THE TYPE OF SPRAY EQUIPMENT USED.
THE END USER SHOULD CHECK THE SUITABILITY OF THIS PRODUCT PRIOR TO USE

HEALTH AND SAFETY PRECAUTIONS: *This product contains Isocyanates. Before using, refer to Safety Data Sheets (SDS). Ensure the same safe working methods are followed for all persons in the work area. Wear suitable protective clothing, rubber gloves and safety goggles with side shields during mixing and application. Respiratory masks should be worn at all times when adequate ventilation does not exist. Contact with skin-wash immediately with soap and water. Contact with eyes-rinse immediately with lots of water and seek medical attention. Keep away from children. **LIMITATIONS:** The end user should check the suitability of this product prior to its application. Do not open until ready to use. The Hanson Group assumes no liability for substrate defects. High temperatures and humidity can significantly affect pot life and the cure time. Low temperatures and humidity can extend the cure time. Excess moisture vapor in concrete slabs may result in polyurea to delaminate, discolor or cause improper curing. **NOTICE:** The information and data contained herein do not constitute sales specifications. The product properties may be changed without notice. No liability, warranty or guarantee of product performance is created by this document. It is the Buyer's responsibility to determine whether Hanson products are appropriate for Buyer's use and to ensure that Buyer's workplace and disposal practices are in compliance with applicable laws and regulations. No freedom from any patents or other industrial or intellectual property rights is granted or to be inferred.*



SURFACE PREPARATION

Surface preparation is the essential first stage treatment of a substrate before the application of any coating. The performance of a coating is significantly influenced by its ability to adhere properly to the substrate material. It is generally well established that correct surface preparation is the most important factor affecting the total success of surface treatment. The presence of even small amounts of surface contaminants, oil, grease, oxides etc. can physically impair and reduce coating adhesion to the substrate.

Be sure that surfaces are clean, dry, and sound and give sufficient profile to obtain adequate product adhesion. Remove all dust, efflorescence, laitance, salts, curing compounds, dirt, oil, form release agents, and other foreign matter. Perform an adhesion test prior to starting any coating project. Metal and composite fiber surfaces should be thoroughly cleaned and primed for optimum adhesion or light abraded by blasting to a 4-6 mil profile. Consult your representative for further information.

Concrete should be cured for a minimum of 28 days prior to product application and have at least 3000psi compressive strength. If the concrete surface is unsuitable for coating, use a suitable primer or suitable primer with sand as a repair agent. Once the repair has cured, prime the entire surface intended for coating. Consult The Hanson Group for selecting the best primer for your substrate.

CONCRETE REPAIR

If the concrete surface is unsuitable for coating, use a suitable primer or suitable primer with sand as a repair agent. Once the repair has cured, prime the entire surface intended for coating. Consult The Hanson Group for selecting the best primer for your substrate.

COLOR

Black, Grey and Neutral. Add color to side B only. The Hanson Group aliphatic polyurea's are UV stable.

COVERAGE RATE

1 gallon (3.79 liters) of PolyArmor SLD 5000-FR will cover approximately 1600 square feet 1 mil (0.025mm) thick, and can be applied in one or more passes to achieve a desired thickness.

PACKAGING

52 gallons Part-A (Isocyanate) and 52 gallons Part-B (Resin) packaged as a "kit" in 2x55 gallon drums. 275 gallon IBC Totes are available.

MIXING PROCEDURES

Adequately blend PolyArmor SLD 5000-FR Part-B (Resin) with air driven power tools until the mixture and color is consistent and uniform with no striations making sure not to encapsulate any air. Do not mix partial containers of multi-component materials. Do not dilute under any circumstances.

STORAGE

PolyArmor SLD 5000-FR has a shelf life of 1 year shelf life from the date of manufacture, in factory-sealed containers. Storage temperature for Part-A and Part-B is between 55°F - 95°F. Avoid freezing temperatures. If shipping or storage temperatures should fall below 55°F some crystallization could result. Unless proper action is taken to re-form the original solution, subsequent dimerization will proceed quickly and will deteriorate the assay of the product. Keep containers sealed tightly to eliminate any condensation, moisture, or water contamination in Part-A or Part-B. Use a Nitrogen to flush partial containers before re-sealing. Never store directly on concrete surface, always store on pallets.

APPLICATION

Primer is recommended on all substrates, except on properly prepared steel (immersion service requires a primer). Prior to application: Precondition both Part-A and Part-B to 75°F - 80°F (24°C - 27°C). Ensure that the substrate and outside air temperature is between 40°F and 104°F, and at least 6°F above the dew point and rising. Fit Part-A with a desiccant drying device. Apply PolyArmor SLD 5000-FR using plural component, high pressure 1:1 ratio heated spray equipment.

PolyArmor SLD 5000-FR should be sprayed in a smooth pattern, to establish uniform thickness and appearance (crosshatch pattern). When polyurea is applied in sections, each application must overlap the previous one within 0-6 hours by a minimum four (4") to a neat straight line. Recoat window is within 0-6 hours of application, if not recoated within 0-6 hours, sand, prime and re-apply. If top coat is required, it must be applied within 6 hours of application.

TYPICAL SPRAY MACHINE REQUIREMENTS

- Capacity minimum 20 lbs. per minute
- Static pressure 1800 – 2500psi
- Spraying pressure 2200psi
- Pressure balance 100 variance desirable
- 300 psi variance maximum
- Temperatures preheaters & hose 155°F-165°F each. Check with your local representative

EQUIPMENT CLEAN-UP

Immediately clean equipment with an environmentally safe solvent, as permitted by local regulations. Cured or dried material may be removed by mechanical means. Know your equipment and how to perform routine maintenance. All spilled materials, unused contents of containers, empty containers and secondary containment spills/leaks, must be cleaned up and disposed of in accordance with local, state and federal regulations.