



PolyArmor *SLD 5000*

TECHNICAL DATA SHEET

PolyArmor SLD 5000 is a 100% solids elastomeric two-component spray applied aliphatic polyurea, with excellent color, UV resistance and gloss retention for use as a protective or waterproof coating designed for commercial, industrial and manufacturing atmospheres. PolyArmor SLD 5000 is used in vertical and horizontal applications on concrete, wood and metal surfaces. Its quick gel and set time is convenient for applications in temperatures down to 0° Fahrenheit, (-17.8° Celsius). It is sprayed in one or more passes and is insensitive to moisture.

FEATURES

- Chemical Resistance - Good
- Complies with National Association of Corrosion Engineers (NACE 6A198) definition for a polyurea coating
- Complies with SCAQMD Requirements - 100% Solids
- Complies with the Polyurea Development Associations (PDA) definition of a pure polyurea coating
- Installation with or without reinforcement
- Low Temperature Flexibility
- Meets USDA Criteria
- No Primer for Carbon or Mild Steel Metals
- Odorless
- Thermal Stability – Excellent

RECOMMENDED USES

- Beverage/Food Processing Plants
- Cold Storage Facilities
- Entertainment
- Environmental
- Gas/Oil - Primary and Secondary Containment
- Industrial/Manufacturing Facilities
- Marine
- Institutional/Medical/Pharmaceutical
- Military
- Mining/Timber
- Parking Structures
- Transportation
- Utilities
- Wildlife Enclosures

TECHNICAL DATA

MIX RATIO BY VOLUME	1A: 1B
POT LIFE @ 150°F (66° C)	10 –12 SECONDS
TACK FREE TIME	15 SECONDS
RECOAT TIME	0 - 6 HOURS
VISCOSITY AT 75°F (24°C), BROOKFIELD:	
PART-A	800 – 1200 CPS
PART-B	300 – 600 CPS
DENSITY (SIDE A & B COMBINED)	1.023 G/CC
SHORE HARDNESS, ASTM D-2240	49 D
TENSILE, ASTM D-412	3753PSI
ELONGATION, ASTM D-412	569%
TEAR, ASTM D-412	602 PLI
TOUGHNESS, ASTM D-412	12135PSI
VOC CONTENT	0 G/L
RETURN TO SERVICE: FOOT TRAFFIC	1 HOUR
RETURN TO SERVICE: FULL SERVICE	6-24 HOURS
TABER ABRASION RESISTANCE, ASTM D-3389 (H18 WHEEL, 1000 CYCLES, 1 KG LOAD) (MAXIMUM)	349 MG LOSS
WATER ABSORPTION, ASTM D-471 (MAXIMUM 23°C, 24 HOURS)	<0.5%
CRACK BRIDGING, ASTM C-836 (-25°C, 1.6MM CRACK, 25 CYCLES)	PASSED
IMPACT RESISTANCE (ASTM D-2794)	PASSED
PULL-OFF STRENGTH (MINIMUM), ASTM D-4541: INTER-COAT ADHESION (WITHIN RECOAT TIME)	EXCELLENT
CONCRETE (PRIMED), SUBSTRATE FAILURE OCCURRED	>800
PRIMED STEEL (90 UM BLAST PROFILE)	>1500
LINEAL SHRINKAGE	1– 2%
FLEXIBILITY (1/8" 3MM MANDREL BEND TEST), ASTM D-522	PASSED

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.

SURFACE PREPARATION REFERENCES

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: CSP 3-5-Concrete surface preparation
 SSPC-SP 5/NACE No.1, White Metal Blast Cleaning
 SSPC-SP 6/NACE No. 3, Commercial Blast Cleaning
 SSPC-SP 7/NACE No. 4, Brush-Off Blast Cleaning
 SSPC-SP 8, Pickling
 SSPC-SP 10/NACE No.2, Near-White Blast Cleaning
 SSPC-SP 11, Power Tool Cleaning to Bare Metal
 SSPC-SP 12/NACE No. 5, Surface Preparation and Cleaning of Metals by Water Jetting prior to Recoating
 SSPC-SP 13/NACE No. 6, Surface Preparation of Concrete
 SSPC-SP 14/NACE No. 8, Industrial Blast Cleaning

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



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CONCRETE REPAIR

If the concrete surface is unsuitable for coating, use FT-6100-MT or FT-6160 primer with sand as a repair agent. Once the repair has cured, prime the entire surface intended for coating.

COLOR

Black and Neutral – Non-Standard colors and color packs are available upon request. Add color to Part-B only.

COVERAGE RATE

1 gallon (3.79 liters) of PolyArmor SLD 5000 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

50 gallons (189.5 liters) Part-A (Isocyanate) and 50 gallons (189.5 liters) Part-B (Resin).

MIXING PROCEDURES

Do not Dilute PolyArmor SLD 5000 under any circumstances. Adequately blend PolyArmor SLD 5000 Part-B (Resin) with air driven power tools until the mixture and color is consistent.

APPLICATION

Prior to application: Precondition both Part-A and Part-B to 75°F - 80°F (24°C - 27°C) before applying. Surface temperature should be greater than 50°F (10°C). Insure that the outside temperature is at least 5°F (-15°C) above the dew point. Fit Part-A with a desiccant drying device. Apply PolyArmor SLD 5000 using a plural component, high pressure 1:1 ratio heated, spray equipment.

Proportioner Conditions:

- Capacity minimum 20 lbs. per minute
- Static pressure 2800 – 3000psi
- 300 psi variance maximum
- Temperatures preheaters & hose 170°F (77°C) each

PolyArmor SLD 5000 should be sprayed in a smooth pattern, to establish uniform thickness and appearance. If required a substrate adhesion test should be performed seven days after application of PolyArmor SLD 5000.

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.

SPECIFICATION AND FIELD ASSISTANCE

Contact Freedom Chemical Corporation for specification assistance. Jobsite visits by Freedom Chemical Corporations employees or its independent agents are for the purpose of making recommendations only and cannot provide analysis of architectural specifications, management or quality control on the project.

STORAGE

PolyArmor SLD 5000 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 59°F - 77°F (15°C - 25°C), avoid freezing temperatures. Keep containers sealed tightly to eliminate any condensation, moisture, or water contamination in Part-A or Part-B.

LIMITATIONS

The end user should check the suitability of this product prior to its application. Excess moisture vapor in concrete slabs may result in primer and/or coating to delaminate, discolor or cause improper curing. Recoat PolyArmor SLD 5000 within 0 – 6 hours of previous coat. Do not open until ready to use. THG assumes no liability for substrate defects. Substrates that have previously been coated are subject to absorption, which may affect the adhesion of a new coating. Surface temperature should be greater than 50°F (10°C) and at least 5°F (-15°C) above the dew point. High temperatures and humidity can significantly affect pot life and the cure time. Low temperatures and humidity can extend the cure time.

WARNING

PolyArmor SLD 5000 contains Isocyanates and Curative Materials.