



POLYURETHANE 300 AROMATIC BASE COAT POLYURETHANE ROOF COATING

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION:

ERSystems® Polyurethane Aromatic Base Coat (Light Gray) is a high performance elastomeric polyurethane coating. The product is a liquid applied, single component, moisture-cured polyurethane coating. Polyurethane 300 Aromatic Base Coat is designed to provide a combination of superb adhesion to a variety of substrates and a balance of high elongation and high tensile strength. Polyurethane 300 Aromatic Base Coat used in conjunction with ERSYSTEMS® Polyurethane 300 Aliphatic Finish Coat provides the ultimate in waterproofing.

TYPICAL PROPERTIES:

Property	Typical Value
ASTM D-6083 PASS	
Percent Solids:	70% ± 2% By Volume Solids
Viscosity:	2500-7500 cps
Ultimate Elongation:	400%
Tensile Strength:	500-600 psi
Moisture Vapor Transmission ASTM E-96 66 Procedure	(a) 15 mil (0.015") Dry Film 3.7 Perm ± 0.6 (b) 30 mil (0.30") Dry Film 2.4 Perm ± 0.4 Cured 7 Days @ 77°F (25°C) 50% RH
Weight/Gallon	10.8 lbs.
VOC Content	233 g/l
Hardness ASTM D-2240	56
Water Absorption ASTM D-471	Approximately 1% By Weight
Cure Time	15-hours to recoat @ (75°F/23.9°C) 45% RH
** The shelf life for an unopened container stored at temperatures between 60°F (15.6°C) and 95°F (35°C) is 6 months from date of manufacture. Store out of direct sunlight in a cool, well-ventilated area. Avoid storing container directly on the floor or against an outside wall	

TYPICAL USES:

Polyurethane 300 Aromatic Base Coat has a high solids consistency designed to provide an economical tough film. It has excellent adhesion to metal roofing polyurethane foam and concrete, aged modified bitumen, aged BUR and other substrates.

COLORS:

Light Gray

PACKAGING:

- 5 Gal. Pail, 55 Gal. Drum

APPLICATION EQUIPMENT:

Application may be by brush, roller or airless spray.

- Brush or Roller:** Recommended for flashing, small inaccessible areas or where over spray may be a problem. Use a medium nap solvent resistant roller.
- Airless Spray Equipment:** Airless spray equipment should be capable of 3 gallons per minute capacity at 3500 psi. 3500 psi at the spray gun is

essential to produce the desired pattern. Polyurethane 300 Aromatic Base Coat is designated a "medium elastomeric coating" with high viscosity for pump purposes. 3/4" high pressure hoses perform well. The airless spray gun should be equipped with a ball-bearing swivel for ease of handling. Recommended orifice size is .028" - .035" diameter, wide-angle fan pattern. A reverse-clean nozzle is recommended. Exact orifice size will vary with temperature of the material and weather condition.

GENERAL APPLICATION:

- All surfaces to be coated must be clean, dry, and free of contaminants, such as dirt, oil, grease, loose coatings or debris. Power wash blasting is typically required to remove contaminants. The initial coat of Polyurethane 300 Aromatic Base Coat is usually back rolled to eliminate pin-holing. Some applications may require a second pass (where a rougher, irregular surface exists). Allow 10 - 15 hours cure time between coats. Polyurethane 300 Aromatic Base Coat can be applied at 2.0 gallons (7.57 liters) per 100 square feet in 2 passes.
- Polyurethane 300 Aromatic Base Coat is designed to be top coated with Polyurethane 300 Aliphatic Top Coat
- In planning application of Polyurethane 300 Aromatic Base Coat consider environment and weather-related conditions such as frost, dew, mist, condensation, humidity, and temperature. Temperature should be above 40°F (4.45°C), more than 5°F above the dew point and rising, for best application results.
- Application of Polyurethane 300 Aromatic Base Coat with spray equipment may require some masking and possible erection of wind screens to prevent over-spray and drift damage.

Over Polyurethane Foam:

- (See Polyurethane Foam Insulation Roof Guideline - Polyurethanes) Follow the detailed instructions regarding characteristics of the Polyurethane foam required and preparation of the surface per the Guideline. Apply Polyurethane 300 Aromatic Base Coat at 2.0 gallons (7.57 liters) per 100 square feet in 2 passes. Allow to cure between coats, and finish with 1.0 gallon (3.79 liters) per 100 square feet of Polyurethane 300 Aliphatic Finish Coat in 1 pass. Rough irregular foam may require an additional gallon of Polyurethane 300 Aromatic Base Coat per 100 square feet to achieve the uniform mil thickness desired.

Over Concrete:

- (See Concrete Roof Guideline - Polyurethanes) Follow the detailed instructions in the Guideline regarding concrete surface preparation prior to applying the Polyurethane 300 Aromatic Base Coat.

- Once the concrete surface is properly prepared, apply Polyurethane 300 Aromatic Base Coat at 2.0 gallons (7.57 liters) per 100 square feet in 2 passes. Allow to cure between coats and finish with 1.0 gallon (3.79 liters) per 100 square feet of Polyurethane 300 Aliphatic Finish Coat in 1 pass. Rough irregular concrete may require an additional gallon of Polyurethane 300 Aromatic Base Coat per 100 square feet to achieve the uniform mil thickness desired.

Over Aged Modified Bitumen and Aged BUR:

- Aged Modified Bitumen and Aged BUR Roof Restoration Guideline). Follow the detailed instruction in the Guideline regarding Aged Modified Bitumen and Aged BUR prior to applying the Polyurethane 300 Aromatic Base Coat.
- Once the Aged Modified Bitumen or Aged BUR surface is properly prepared, apply a minimum of 2 gallons (7.57 liters) per 100 square feet of Polyurethane 300 Aromatic Base Coat in two passes. After allowing the base coat to cure, apply Polyurethane 300 Finish Coat at 1.0 gallon (3.79 liters) per 100 square feet in 1 pass. Rough, irregular, and badly alligatored surfaces may require a full ply of polyester fabric across the entire field of the roof. An additional gallon of Polyurethane 300 Aromatic Base Coat per 100 square feet may be required to achieve the uniform mil thickness desired.

Over Single-Ply Membranes and other substrates:

- Polyurethane 300 Aromatic Base Coat is also used to protect and restore a variety of roof substrates such including Single-Ply Membranes.
- (See Thermoset and Thermoplastic (Single-Ply) Roof Guidelines - Polyurethanes) Follow the detailed instructions in the Guidelines regarding single-ply surface preparation prior to applying the Polyurethane 300 Aromatic Base Coat.
- Once the single-ply surface is properly prepared, apply Polyurethane 300 Aromatic Base Coat at 1.0 gallons (3.79 liters) per 100 square feet in 1 pass. Allow to cure between coats and finish with 1.0 gallon (3.79 liters) per 100 square feet of Polyurethane 300 Aliphatic Finish Coat in 1 pass.
- Adhesion of **Polyurethane 300 Aromatic Base Coat** should always be checked. Apply 6-12" square of **Polyurethane 300 Aromatic Base Coat** and embed a piece of polyester fabric into the coating, leaving a tail of the fabric exposed. Allow 2-3 days for the **Polyurethane 300 Aromatic Base Coat** to cure and perform a 90° pull test of the fabric tail to test adhesion of the coating to the substrate.

RE-COAT TIME:

- Polyurethane 300 Aromatic Base Coat will typically cure sufficient to re-coat in 16 - 24 hours, at 75°F (23.9°C) and 45% R.H. Lower temperature and lower humidity will typically retard the cure rate.

APPLICATION LIMITATION:

- Prior to the application of any top coat over new or freshly applied asphalt based product consult with the asphalt product manufacturer or NRCA guidelines for necessary asphalt cure times prior to coating.

TEMPERATURE CONSTRAINTS:

- Cold temperatures influence viscosity and pumping/handling characteristics of Polyurethane 300 Aromatic Base Coat. Heat increases and cold decreases the flow of Polyurethane 300 Aromatic Base Coat. When temperatures fall below 60°F (15.6°C), Polyurethane 300 Aromatic Base Coat can best be applied after storage at 70°F (21.1°C). or higher for a minimum of 48 hours prior to usage. For ease of application, material temperature should be 60°F (15.6°C) minimum. If Polyurethane 300 Aromatic Base Coat is to be pumped at temperature below 60°F (15.6°C) insulated or heated hoses may be required. For additional cold weather application techniques and information, consult ITW POLYMERS SEALANTS NORTH AMERICA. The temperature service range is -50°F (-45.6°C) to 200°F (93.3°C). The substrate temperature range for application is 40°F (4.45°C) – 120°F (48.9°C).

LIMITATION:

- Polyurethane 300 Aromatic Base Coat cures by reacting with air moisture. Partially used containers should not be left open and exposed to the air. Curing in the once opened container can be slowed by placing plastic wrap directly over the surface of the coating and tightly resealing the container. If a cured film has formed on the top of the product it should be carefully cut away prior to mixing the remainder of the product in the container. The surface film formation does not affect the performance of the remaining product.

CLEAN UP:

- Upon completion of the application, tools, hoses and equipment must be cleaned immediately with xylene (xylol) solvent.

STORAGE:

- Store dry, out of direct sunlight at 40–95°F (4–35 °C). Condition material to 65–85°F (18–30 °C) before using.

CAUTION:

- Contains polyurethane resin and mineral spirits. If swallowed, do not induce vomiting. If splashed in eyes, flush with clean water for a minimum of 15 minutes. In either case, call physician immediately. If splashed on skin, wash thoroughly with soap and water. Avoid breathing vapors and spray mists. Capable of producing severe dermatitis and bronchial spasms. Keep away from heat, sparks and open flames. Close container after use. Keep out of reach of children.
- The flow of material through pump and system could create static electricity. When pumping flammable materials, all equipment must be properly grounded to prevent static discharge and sparking, which could cause fire or explosions. Use only conductive or grounded air and material hoses and be sure that your compressor and pump are properly grounded per manufacturer's recommendation.

PRIOR TO USE OF THIS MATERIAL,
READ ALL APPROPRIATE SAFETY DATA SHEETS

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