Technical Data Sheet

IB Urethane Base Coat

IB Roof Systems®

Moisture Cure Aromatic Urethane Base Coat

Product Description

IB Urethane Base Coat is a high performance, single component, moisture cure elastomeric polyurethane coating, that is designed to provide excellent adhesion to a variety of substrates. Has high elongation and high tensile strength properties which helps enhance the bonding of the IB Urethane Finish Coat.

Packaging

5-Gallon Pail and 55 Gal drums

Features and Benefits

- Moisture cure, polyurethane-based
- High elongation and high tensile strength properties
- Low viscosity helps penetrate into porous substrates and enhancing bonding properties
- Color: Light Gray

Product Use

IB Urethane Base Coat is used as a base coat over a variety of substrates to provide a tough, resilient film and enhance the bond of the IB urethane finish coat. It has excellent adhesion to polyurethane foam (PUF), concrete, aged, modified bitumen, aged BUR, and other substrates.

Ordering Information

IB Urethane Base Coat			
Item Code	**Description**	**Size**	**Class**
9-UBCG5	IB Urethane Base Coat Gray	5-gal	55
9-UBCG55	IB Urethane Base Coat Gray	55-gal	55

Coverage Rate (approximate)

Approximate coverage rate is 1.0-gallon (3.78 L) per 100 square feet (16 wet mils) per pass in one (1) or two (2) passes, depending on substrate type. Typical total application rate of 2.0 gallons (7.57 L) per 100 square feet.

Yield (1.0 gal/100 sq. ft.) = 16 wet mils/11.2 dry mils. Yield (2.0 gal/100 sq. ft.) = 32 wet mils/22.4 dry mils.

It is recommended to back roll the initial coat of IB Urethane Base Coat to eliminate pinholes. Some substrates require a second pass. Allow 10 - 15 hours cure time between coats.

See recommendations for specific applications. Yields will vary depending upon system selected and the smoothness and absorbency of substrate.

Temperature Precautions

Do not apply this product below 40°F (4°C) or in weather conditions where the temperature will drop below 40°F (4°C) during the curing cycle or if frost, dew, mist, condensation is present, or in high humidity conditions. Upper temperature restriction (both air and substrate) for application of IB Coating products is 120°F (49°C). If the substrate temperature exceeds 120°F (49°C), IB Coating products should be applied during cooler periods of the day. No coating should be applied unless surface temperature is 50°F (10°C) minimum and 120°F (49°C) maximum.

Relative Humidity Precautions

Polyurethane products are moisture sensitive. Do not apply this product when it is raining or if the threat of rain exists. Do not apply it when the dew point is less than 5°F below the ambient temperature. Do not apply in conditions when the relative humidity exceeds 90%.

Storage

Always store in cool, well-ventilated area. Avoid storing container directly on the floor or against an outside wall. For best results, keep product stored above 50°F (10°C) or below 95°F (35°C). Do not store in direct sunlight or in temperatures above. Keep from freezing. Allow material to condition at room temperature to a material temp between 65°F and 85°F (18°C – 30°C) for 24 hours prior to use.

IB Urethane Base Coat		
Physical Properties		
Property	**Test Method**	**Typical Value**
% Solids by Volume	D2697	70% ± 2%
% Solids by Weight	D1644	51% ± 2%
Ultimate Elongation	-	400% (initial)
Tensile Strength	-	500 – 600 psi
Viscosity	D2197	2500 - 7500 cps
Weight per Gallon	-	10.8 lbs./gal
VOC Content	EPA M24	< 250 g/L
Moisture Vapor Transmission cured 7 days @ 77F (25C), 50% RH 15 mils DFT 30 mils DFT	E96 66 Procedure	 3.7 Perms, ± 0.6 2.4 Perms, ± 0.4
Shore A Hardness	D2240	56
Water Absorption	D471	1% by weight
Surface Dry Time 75°F (24°C) , 45% RH	-	15 hours to recoat
**Shelf Life: (unopened container stored at temperatures between 60°F and 90°F.	-	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.		

Application Guidelines

Application Equipment

Airless Sprayer:

- **Output:** Minimum 3.0 gal per minute
- **Pressure:** Minimum 3,500 psi high-pressure airless pump
- **Transfer Pump:** 3:1 transfer pump to prevent cavitation
- **Spray Gun:** Contractor rated for pressure (5000 psi), equipped with a ball-bearing swivel for ease of handling.
- **Hoses:** 3/4" min ID minimum up to 75 ft., 1" min ID up to 200 ft., and 1-1/2" min ID over 200 ft. Use largest diameter at pump. Hoses rated to 2X maximum pump pressure. Hose lining should be BUNA-N jacketed to prevent moisture contamination. Do not use a hose that has been used for Acrylics. The liner will absorb moisture and start the silicone cure process.
- **Orifice Tip**: .028" - .35" diameter, wide angled fan angle of 40 to 50 degrees is recommended. A reversible self-cleaning type nozzle is also recommended. Exact orifice size will vary with temperature of the material and ambient temperatures.

Brush: No reduction necessary. Use synthetic filament paint brushes. Do not over-brush as material may start to pull.

Roller: No reduction necessary. Use 1-1/4" solvent resistant nap rollers. Keep a wet edge to avoid pulling. Avoid rapid rolling which can cause bubbling.

Spraying: When spraying material should be at least 75°F (24°C). Before applying additional coat, the previous coat must be completely dry and cured.

Caution: Application of IB Urethane Base Coat with spray equipment may require some masking and erection of wind screens to prevent overspray occurrences and damage to surrounding structures, surfaces, vehicles, property, or persons.

Mixing

No thinning or reduction is necessary. Do not dilute.

Surface Preparation

The substrate must be free of areas of ponding water, ice, snow, rain or dew, dirt, dust, grease, oil, loose granules, gravel, peeling coating and other foreign contaminants, or other debris that would inhibit adhesion

of coating. If such conditions exist, the roof surfaces should be properly prepared and cleaned using the specified IB cleaning solution in order to receive the new coating system.

Mildew must be removed by power washing and scrubbing with a bleach solution of 1 part bleach and 2 parts water. Repeat if necessary. Rinse thoroughly and allow it to dry.

Existing coatings must be tested to determine compatibility and adhesion. Contact IBRS Technical Department at 800-426-1626 for recommendations regarding specific applications.

Application

Adhesion Test: Existing coatings must be tested to determine compatibility and adhesion. Apply 6" – 12" square of the coating and embed a piece of 1" wide IB Fabric into the IB Urethane Base Coat, covering with the desired base coat or topcoat and leaving a minimum 2" tail of the fabric exposed. Allow to cure for 2-3 days before performing a 90° pull test of the fabric tail to test adhesion of the IB Urethane Base Coat to the substrate.

Aged Modified Bitumen and aged BUR: To primed substrate; apply a base coat of IB Urethane Base Coat at the rate of 1.0 gallons (3.78 L) per 100 square feet (16 wet mils) in 1 pass. Allow to cure before applying a second coat of IB Urethane Base Coat at 1.0 gallons (3.78 L) per 100 square feet, totaling 2.0 gallons per 100 square feet (32 wet mils). On rough, irregular, and badly alligatored surfaces a full ply of IB Fabric (polyester fabric) may be required across the entire field of the roof set in a full embedment of the wet IB Urethane Base Coat followed by an additional application of 1.0 gallons of IB Urethane Base Coat per 100 square feet to achieve the uniform mil thickness desired. Allow to cure before applying the IB Urethane Finish Coat.

Concrete: To properly prepared substrate; apply a base coat of IB Urethane Base Coat at the rate of 1.0 gallons (3.78 L) per 100 square feet (16 wet mils) in 1 pass. Allow to cure before applying a second coat of IB Urethane Base Coat at 1.0 gallons (3.78 L) per 100 square feet, totaling 2.0 gallons per 100 square feet (32 wet mils). Allow to cure before applying the IB Urethane Finish Coat.

Metal: To properly prepared substrate; apply a single coat of IB Urethane Base Coat at the rate of 1.0 gallons (3.78 L) per 100 square feet (16 wet mils) in 1 pass. Allow to cure before applying the IB Urethane Finish Coat.

Polyurethane Foam (PUF): To properly prepared substrate; apply a base coat of IB Urethane Base Coat at the rate of 1.0 gallons (3.78 L) per 100 square feet (16 wet mils) in 1 pass. Allow to cure before applying a second coat of IB Urethane Base Coat at 1.0 gallons (3.78 L) per 100 square feet, totaling 2.0 gallons per 100 square feet (32 wet mils). Rough irregular foam may require an additional gallon of IB Urethane Base Coat per 100 square feet to achieve the uniform mil thickness desired. Allow to cure before applying the IB Urethane Finish Coat.

Single Ply Membranes (EPDM, Hypalon, KEE, PVC, and TPO): To properly prepared substrate; apply a single coat of IB Urethane Base Coat at the rate of 1.0 gallons (3.78 L) per 100 square feet (16 wet mils) in 1 pass. Allow to cure before applying the IB Urethane Finish Coat.

Curing and Re-Coat Time:

IB Urethane Base Coat under normal drying conditions of 75°F (24°C) and 45% RH, will be sufficiently cured to accept a recoat of IB Urethane Base Coat or a urethane finish coat in 16 - 24 hours. Additional drying time must be allowed during colder temperature applications. Prior to applying the urethane finish coat.

Limitations

- Refer to Substrate Preparation guidelines for proper preparation, cleaning and primer roof with any applicable bond enhancing primer before commencing with application of IB Urethane Coatings.
- This product cures by reacting with air moisture only. 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.
- Be sure that areas that are not to be painted are well protected from overspray. Once dry, xylene may be required for cleanup. If xylene is prohibited by regulations, acetone may be used in lieu of xylene.

Clean Up

Clean spray equipment containing uncured material by flushing with xylene (xylol), IB Urethane based coatings and primers cure by reaction with moisture. DO NOT USE WATER OR RELAIMED SOLVENTS. Do not leave material in spray guns, pump equipment, and/or hoses for prolonged periods unless equipment contains moisture lock hoses, fittings, and seals. Without these, material will cure on hose walls and at unsealed connections possibly causing an increase in operating pressure and material flow restriction.

Disposal

Empty containers must be disposed of in an approved landfill in accordance with local, state, and federal regulations.

Caution

This product is not intended for non-industrial use. The solvents used in this product are flammable and, in some cases, irritating to the eyes and skin. Keep containers tightly closed and away from heat, sparks, and open flame. IB Urethane Bae Coat contains chemically active isocyanate groups that react with water, alcohols, and amines. Avoid breathing vapors and contact with skin. Use appropriate chemical cartridge or air-supplied respirators where limited air movement might occur. In confined areas, adequate ventilation or fresh air supplied hoods must be provided during application. Avoid prolonged and repeated contact with skin. Do not take internally. Avoid eye contact as this material has adhesive properties. Wear appropriate protective clothing for the skin. Refer to product Safety Data Sheet (SDS) for additional information pertaining to this product and prior to use or handling. Keep out of reach of children. If swallowed, DO NOT induce vomiting. Drink 1 to 2 glasses of water. Call a physician immediately.

Disclaimer

All values given are approximate and are subject to change without notice. There is no implied or express warranty given through these values or statements, nor are there any assertions that the product purchased has been individually tested to conform to these standards. Testing is performed on a random basis by "in-house" and independent "third party" evaluation for the purpose of classification and or approval. Acceptance, purchase, and selection of these products are the sole responsibility of the buyer or buyer's representative. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of the product only.

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