Technical Product Data

SKYTITE® A-1000 Series Acrylic Roof Coatings

SKYTITE A-1001 White, SKYTITE A-1002 Light Gray, SKYTITE A-1005 Light Tan

PRODUCT DESCRIPTION:

SKYTITE A -1000 Series is an advanced acrylic elastomer coating that combines high solids emulsion polymers and potent biocides to provide superior durability, reflectivity, weatherproofing, and mildew resistance. Non-migrating fire-retardant chemicals are permanently locked into the cured coating to assure performance.
SKYTITE A-1000 Series is unique among acrylic elastomers in that elongation and tensile strength properties are both maintained at lower temperatures.

PHYSICAL PROEPRTIES:

Solids by Weight	66% (±2) [ASTM D1644]
Solids by Volume	53% (±3) [ASTM D2697]
Tensile Strength	284 psi (±20) @ 75°F (24°C) [ASTM D2370]
Elongation	258% (±20) @ 75°F (24°C) [ASTM D2370] SKYTITE A-1000 Series Roof Coating is unique in that it maintains its elongation values at freezing temperatures, as well as after extended weathering.
Hardness	55-65 Shore A [ASTM D2240]
Permeance	22.5 U.S. Perms @ 20 mils (508 microns) [ASTM D1653]
Permeability	0.11 Perm Inches [ASTM E96]
ASTM D6083	Independently tested and certified to exceed ASTM D6083 standards.
EPA ENERGY STAR® Program	Independently tested and certified to surpass ENERGY STAR and CRRC guidelines for energy efficiency.
High Temperature Stability	Did not age-harden or slump at temperatures up to 200°F (93°C). [ASTM D794]
Elongation Retained After Aging	After 1,000 hours exposure, passed the requirements of ASTM D6083/ASTM D2370 – minimum 100% @ 73°F (23°C).
Bond Strength	No adhesive failure between the coating and PUF substrate. SKYTITE A-1000 Series Roof Coating remained totally bonded to the polyurethane foam under all stress conditions. [ASTM C297]
Ponded Water Adhesion	After 30 days of continuous testing, SKYTITE® A-1000 Series Roof Coating showed no significant loss of adhesion. No blistering or other deleterious effects were observed.
VOC	<80 g/L
Dry Time for Foot Traffic Resistance: *	3 hours at 75°F (24°C), 50% R.H. Medium Gray @ 16 wet mils (406 microns) 5 hours at 75°F (24°C), 50% R.H. White @ 16 wet mils (406 microns) *Dry times will increase with lower temperature and/or higher humidity.
Temperature Limits for Normal Service Conditions	-30°F to 200°F (-35°C to 93°C)
Resistance to Accelerated Weathering	After 3,000 hours of continuous exposure, showed no deleterious effects, no surface checking or cracking, no delamination and no color fade. [ASTM D6083, ASTM D4798]
Resistance to Wind Driven Rain	After 40 hours of continuous testing, no apparent moisture penetrated the coating. [Tested in accordance with Federal Specification TTC-555 B]
Resistance to Foot Traffic [Tested in accordance with FM 4470]	No tearing, cracking, rupturing or permanent deformation of the SKYTITE A-1000 Series Roof Coating, or exposure of the polyurethane foam was observed. Test exceeds the stresses of normal roof maintenance traffic.
Low Temperature Flexibility	Capable of withstanding 180° bends over a 3/16" (5 mm) mandrel @ -21°F (-30°C). [Federal Test Method no. 141a-6221]
Cold Temperature Flex after Weathering	After 1,000 hours exposure, retained ability to withstand multiple ½" (1.2 cm) mandrel bends without cracking at -15°F (-18°C). [ASTM D6083, ASTM D522]
Simulated Hail Damage [FM 4470 – Severe]	Coated foam panels passed multiple impacts with no evidence of membrane failure. Test was repeated following 1,000 hours exposure; no changes noted.

APPROVALS:

Underwriters Laboratories (UL) UL 790 Class A*	Over many different types of UL classified spray-applied polyurethane foams. Refer to UL Roofing Materials and Systems Directory or UL website for foam manufacturers and types, foam thicknesses and densities, inclines and coating requirements of rated roof systems.
Factory Mutual (FM)	Approved (a) as a Class 1 Insulated Steel or Concrete Deck Roof System for new construction, and (b) as a Class 1 Re-Cover Application System when installed over existing Class 1 built-up roofing. Subject to the conditions of approval as described in the FM Approval Guide, or job Identification no. 2NIA3.AM.
UL Construction Nos. 74, 136, 181 & 206 – U.S. Navy White House Test/UL Standard 1256**	UL fire classification with a variety of polyurethane foams sprayed over metal decking. Refer to UL Roofing Materials and Systems Directory or UL website under Roof Deck Construction for illustration & description of each rated roof system.
California State Fire Marshal	Conforms to Class "A" requirements with various spray-applied polyurethane foam systems.
Building Code acceptance	SKYTITE A-1000 Series Roof Coating/Polyurethane Foam Roofing Systems are accepted by all major model building code authorities for Class "A" and Class "B" constructions. These building code authorities also accept UL Construction no.136 as an approved roof system over metal decks without a thermal ignition barrier.
International Code Council (ICC) approval	Approved as a fire-retardant roof coating over many different types of spray-applied polyurethane foam on non-combustible substrates, existing fire-retardant BUR & new wood substrates. See ICC ES reports 2298 and 2489 for specifications and conditions of use concerning material presented in this document.
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Application Instructions:

SUBSTRATE PREPARATION: Polyurethane foam and adjacent surfaces to be coated shall be free of any degraded foam, grease, oil, dirt, or other contaminants that will interfere with proper adhesion. Polyurethane foam shall be completely dry and frost-free before coating. Any physical damage to the polyurethane foam shall be repaired before coating application commences. Any oxidized polyurethane foam shall be repaired or replaced. Do not coat directly over polyurethane foam that has been mechanically scarified or sanded.

MIXING: Thoroughly mix using a power mixer for a minimum of 5 minutes prior to application. For 5-gallon (19 liter) pails, use a 3" (76 mm) minimum diameter mixing blade; for 55-gallon (208 liter) drum, use a 6" (152 mm) minimum diameter blade.

APPLICATION: Apply to polyurethane foam surfaces between 24 and 72 hours after final application, depending on climate and manufacturer (refer to foam manufacturer for more information). Coating should be applied within this time frame to prevent surface oxidation that would interfere with coating adhesion. Apply product with an airless sprayer, covering the surface at an even rate. Use an airless spray pump with a 1 gallon-per-minute (3.8 L/minute) output and 2,000 psi (13,790 kPa) pressure capability. Use a reversible, self-cleaning tip with orifice size 0.027"–0.039" (0.69–0.99 mm) and a fan angle of 40° or 50°. Filter screens should be 30 mesh or larger. Use 3/8" (9.5 mm) minimum inside diameter, nylon high pressure-type hose for lengths up to 75 ft. (23 m) from pump. For 75 ft.–200 ft. (23–51 m), use 1/2" (13 mm) inside diameter hose added to pump side of existing 3/8" (1 mm) hose to maintain pressure and delivery. Over 200 ft. (51 m), use 5/8" to 3/4" (1.6 to 1.9 cm) inside diameter hose added to pump side of existing hose. Apply at a minimum rate of 100 ft²/gallon (2.5m²/L) per coat. Coating must be applied in two or more separate coats to ensure proper coverage and cure rate, and to achieve a pinhole-free continuous film. Each coat shall be applied in a direction perpendicular to the previous coat to ensure positive coverage. Each coat of coating must be dry and cured before an additional coat is applied. All surfaces must be uniformly coated and free from voids, pinholes, or blisters.

APPLICATION NOTE: Requires complete evaporation of water to cure. Cool temperatures and high humidity slow cure.

Apply in two coats at a minimum total rate of 1-1.5 gallons per 100 ft² (.4-.6 l /m²). Consult BASF's product specifications for specific film thickness requirements to qualify for BASF's product warranty.

Packaging: 5-gallon (19 liter) pail; 54-gallon (204 liter) drum

Storage: SKYTITE A-1000 Roof Series Coating will freeze and become unusable at temperatures below 32°F (0°C). Do not ship or store unless protection from freezing is available. SKYTITE A-1000 Roof Series Coating should generally not be used over cold storage tanks or buildings unless applied over a vapor barrier coating. SKYTITE A-1000 Roof Series Coating shall not be used for interior applications in place of a thermal barrier.

Shelf Life: Shelf life 24 months if unopened containers stored between 40°F and 70°F (4°C - 21°C).

Limitations and Precautions:

Do not apply SKYTITE A-1000 Series Roof Coating at temperatures below 50°F (10°C), or when there is possibility of temperatures falling below 32°F (0°C) within a 24-hour period after application.
SKYTITE A-1000 Series Roof Coating requires complete evaporation of water to cure. Cool temperatures and high humidity retard cure. Do not apply if weather conditions will not permit complete cure before rain, dew or freezing temperatures occur. Do not apply in the late afternoon if heavy condensation may appear during the night.

Freight Classification: Non-Hazardous/Non-Regulated Product

Handling and Safety:

For specific information regarding safe handling of this material please refer to the Safety Data Sheet (SDS).

Cleanup of Spills or Leakage: Use water and UCC or other similar detergent to thoroughly flush equipment. Purge the water from the system using Mineral Spirits or Glycol Ether. Leave the solvent in the lines and equipment until next use. It is not recommended practice to leave SKYTITE A-1000 Series Roof Coating in the pump or hoses.

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LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY:

Various Special Warranties may be purchased from BASF Corporation. These include Full System Limited Warranties for 5 to 20 years and Coating-Only Limited Warranties for 5 to 20 years. Special warranties are available only when the roof system is applied by a BASF Approved Applicator in strict accordance with BASF's application specifications for the particular warranty package selected. If no special warranty is purchased, BASF's Standard Product Warranty applies. For details on all available warranties, contact your BASF Roofing Specialist.

Certifications approvals and listing are based on a specific design configuration and should be verified with BASF. Important: The information, data and products presented herein are based upon information reasonable available at the time of publication, and are presented in good faith, but are not to be construed as guarantees or warranties, express or implied, regarding performance, results to be obtained from comprehensiveness merchantability or that said information, data or products can be used without infringing patents of third parties. You should thoroughly test any application, and Independently determine satisfactory performance before commercialization.

***Cements and Coatings for Built-Up Roof Coverings Classified by Underwriters Laboratories Inc.® as to an external fire exposure only. See UL Roofing Materials and Systems Directory.**
****Roof Coatings Classified by Underwriters Laboratories Inc.® as roof deck construction material with resistance to an internal fire exposure only for use in Construction nos. 74, 136, 181 & 206. See UL Roofing Materials and Systems Directory**