
BluSky Armor® 1027-S/M
Aerospace Clear Top Coat Matte/Satin

Product Description

A single stage, cross-linked UV curable thermoset polymer top coat. For use as a finish for wood and synthetic substrates. Upon exposure to UV, the coating cures tack-free within 120 seconds. The cured coating has excellent adhesion, is harder, more abrasion and solvent resistant than other polyurethane or polyester thermoplastic coatings. Use on flat or curved surfaces that are not mechanically buffed and polished, or when minimal spot buffing is required. The formulation is 100% solids containing zero solvents or HAPs (100% VOC free). The product exhibits no off-gassing, resulting in no “orange-peel” to be sanded off between applications. The product does not need any catalyst or reducer and is ready to use as is.

Storage

Store product at ambient temperature (< 70 °F). Storing at cooler temperatures will increase product lifetime. Storing at higher temperatures will decrease product lifetime. Product is warranted to be free from defects in performance and design for a period of 6 months from the date of manufacture if stored at < 70 °F without opening. Any tampering, misuse or negligence in handling or use of the product renders the warranty void. Further, the warranty is void if, at any time customer opens the product or stores the product in a manner inconsistent with the recommended conditions.

Method of Use

Product is stable under typical ambient room lighting for 10 – 30 minutes. Stability can be extended to several hours by using UV Protective Films on lights and windows in the area where the product is being used. Product may not be mixed with other top coat products. Product may be reduced with isopropyl alcohol (IPA). Do not use the product in areas exposed to direct or indirect sunlight (i.e. through windows). Product is unstable and will cure upon exposure to sunlight.

Surface Preparation

Clean the surface area to remove any contamination. Use only dry air or alcohol (such as IPA) to clean the surface. Do not use any solvent based cleaner, degreaser, or tack cloths. Use sand paper or Scotch Brite. Remove dust using compressed air. The product can be applied over completely cured stains, sealers, or primers.

For applications on wood, seal the wood using BluSky Armor® 1007-U Sealer per the instructions from the BluSky Armor® 1007-U Sealer TDS.

When using over cured sealers and primers, the substrate requires sanding with non-stearated sandpaper before applying product.

Application

Apply in a well-ventilated room, use appropriate PPE including safety glasses and protective clothing (refer to SDS). Wear a respirator when spray coating.

Brush, roll or spray onto substrate at room temperature (>70 °F).

Substrate temperature should be >60 °F.

Any spray equipment may be used. The recommended tip size is 1.0 – 1.4.

After use, unused resin should be stored in an opaque container and may be reused as long as the viscosity has not increased. Unused resin should not be returned to the original container.

The spray equipment should be cleaned with isopropyl alcohol.

First coat (seal coat) should be applied as per the Application Process below, depending on if the surface is unstained, stained or has a sealer or primer coat.

Apply subsequent build coatings at thicknesses of 2 - 5 mils.

Application Process on Wood and Wood Veneer

1. SEAL COAT

- a. Seal the wood using BluSky Armor® 1007-U per the instructions from the BluSky Armor® 1007-U TDS.

2. BUILD COATS

- a. Build coating to desired thickness using BluSky Armor® 1027 or BluSky Armor® 1057-U per the instructions from the appropriate BluSky Armor® TDS.

3. FINAL Matte/Satin LAYER

- a. Apply a layer of full strength BluSky Armor® 1027 Matte or Satin of 2 - 5 mils. Allow a minimum of five-minute dwell time to allow the wet clear coat to self-level.
- b. Cure the finish by exposing the panel to MSI UV-500 curing light for 120 seconds, or until the finish is cured completely tack-free.

Clean Up

Use isopropyl alcohol to clean tools and equipment.

For skin contact, wipe with IPA, then wash with soap and water.

Some key “Do’s and Don’ts”:

1. Do **not** use a degreaser or petroleum or wax tack cloth to prepare the surface of the panel. Use 91% isopropyl alcohol (IPA) to prep before application of the seal coat and between coats.
2. Use a spray nozzle tip size of 1.0 – 1.4 to spray 1027-U; or a tip size of 1.6 – 1.8 to spray 1057-U.
3. Use low pressure on the spray gun, approximately 20 PSI. Adjust pressure to keep spray pattern compact and to minimize introduction of air bubbles into the clear coating.
4. Make sure that the can or the cup liner in the sprayer is opaque to block any light from activating the clear coat in the sprayer. 3m’s PPS cup liner system, p/n 50730, is an ideal solution.
5. Avoid over-working the surface with coarse grit paper. Keep moving up in grit fineness.
6. Sand, cut and buff within 18 hours of applying final top coat. The finish hardens as it cures.
7. If saving leftover clear coat, store it in an opaque bottle separate from any unused BluSky Armor® clear coat in its original container.
8. Clean up the spray equipment with isopropyl alcohol.

Physical Properties

Vertical Burn	CFR Part 25.853(a)	Pass
Pencil hardness	ASTM D3363	6H
Adhesion Wood Veneer	ASTM D3359-09	Class 5B
MEK Double Rubs	ASTM D5402-93	200+
Alcohol (IPA)		200+
Diet Coke		200+
Red Wine		200+
Tensile Modulus	ASTM D638-10	30,000 psi
Strength		70 psi
Elongation		15%
Shore D Hardness	ASTM D2240-15	63
Density		1.1 kg/L 9.2 lb/gal

Additional information

Solids content	100%
Volatile Organic Content	0%
Coverage @ 4 mil	400 sq. ft./gal
@ 10 mil	160 sq. ft./gal

Product Hazards and Safety information

See SDS for complete information.

Although the product is VOC free it should be used in a well-ventilated area.

If skin contact occurs immediately wash with soap and water.

Harmful if swallowed.

Causes skin and eye irritation and may cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

This product complies with the *European Parliament & Council Directive 76769EEC* and does not contain decabromodiphenyl ether, pentabromodiphenyl ether or octabromodiphenyl ether.

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