



TECHNICAL DATA BULLETIN

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This product is covered by U.S. Patent 8304032 (method), U.S. Patent 8440013 (composition), and Canadian Patent 2,629,952.

Revision #: 001

Revised: 03/09/21

Product Code: 12-89

Product Name: Black Exterior Grade UV Cure Coating

Description:

Exterior grade radiation cure coating designed for use over vinyl and other composite or fenestration products.

- Product contains 100% solids thus emit no volatile organic compounds (VOC's) or hazardous air pollutants (HAPs).
- Exceptional film properties such as adhesion, color hold, gloss retention, resistance to mold, moisture, staining, and scratch are produced when properly applied and cured.
- Product is formulated to provide excellent solar reflectance and reduction in heat build.
- Heat generated from the UV lamps starts the air-dry curing reaction of coating in pocket (recessed) areas.

Application:

A wide range of application equipment can be used including conventional spray, electrostatic, HVLP, air-assist airless, airless, flow, roll, or vacuum coating.

- Substrate should be free of grease, oil, and other contaminants. See Technical Data Bulletin for Composite Coatings SP-02 Cleaner for specific cleaning instructions.
- Use heat to lower viscosity and gloss if needed.
- Recommended film thickness 1.0 – 1.3 wet.
- Cure schedule consists of Gallium followed by Mercury microwave lamps. Minimum cure schedule is as follows:

Band	mJ/CM2	mW/CM2
UVA	542	880
UVB	396	854
UVC	38	90
UVV	1403	3502

Liquid Coating Properties:

Property:	Result:
Gallon Weight (lbs/gallon)	9.13 +/- .2
Weight Solids	100%
Volume Solids	100%
Viscosity #4 Zahn @ 77°F	15"-20"
VOC as Supplied (lbs./gls)	0

Cured Film Properties

At 1.0 – 1.2 mils Dry Film Thickness over PVC

Test:	AAMA 615 or ASTM	Result:
Color	AAMA 6.1.2	DEcmc <.5
Specular Gloss	AAMA 6.2.2	20 – 30 units
Hardness	AAMA 6.3.2	3H
Adhesion, Dry	AAMA 6.4.2	No removal
Adhesion, Wet	AAMA 6.4.2	No removal
Boling Water	AAMA 6.4.2	No removal
Direct Impact	AAMA 6.5.2	No removal
Abrasion	AAMA 6.6.2	Pass
Muriatic Acid	AAMA 6.7.1.2	Pass
Mortar	AAMA 6.7.2.2	Pass
Nitric Acid	AAMA 6.7.3.2	Pass
Detergent	AAMA 6.7.4.2	Pass
Window Cleaner	AAMA 6.7.5.2	Pass
Humidity	AAMA 6.8.2	Pass
Weathering, QUV	ASTM G154	ΔE <3.0 Hunter
Chalking	4,000 hours	Pass
Gloss Retention	Cycle Test ¹	Pass
Erosion	AAMA 6.9.1.5.2	Pass
Cold Crack	AAMA 6.10.2	Pass
Oven Aging	AAMA 6.11.2	3H, 100% adhesion
Heat Build ²	6.12 Vertical	</= 54°F
Solar Reflectance ²	ASTM C1549	46%

¹ Cycle test consists of 12 hours UVA using 340 bulbs at irradiance of .76 w/m² at 60°C, followed by 11:50 condensation, and 10 minutes cold water spray.

² Heat Build and Solar Reflectance are color specific.

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