BA DM102

CRC / VDA / 100 GA POLYIMIDE / 966 PSA



Description:

BA DM102 is a thermal control pressure sensitive tape made of aluminized polyimide film with a corrosion-resistant coating over the VDA surface for protection against salt fog and humidity at launch sites, and a 3M 966 acrylic pressure sensitive adhesive with removable liner. It is used as a first surface mirror and as edge closure on MLI blankets, complies with ASTM D-5213 and is available in widths from 1/2 to 46 in on 108 LF rolls. At 3 mil it has 20 oz/in adhesion to steel, an emittance of 0.045 or less and an absorptance of 0.14 or less.

Features & Benefits:

- Operating temperature -40 to 425 °F intermittent, -40 to 250 °F continuous (based on the PSA performance, not the polyimide film; per 3M technical support)
- Low emittance and absorptance for first surface mirror use: emittance ≤ 0.045, absorptance ≤ 0.14
- Salt spray 168 hrs: no visible degradation (ASTM B117)
- Outgassing TML < 1.0%, CVCM < 0.1% (ASTM E595)
- Elongation 40%, shrinkage < 2.5% (400 °C / 2 hours)

Applications:

First surface mirror in MLI blankets

Edge closures on MLI blankets

Construction/ Typical Properties	Value	Test Method
Metallization Type:	99.99% Pure Aluminum	
Deposition:	300 Å Minimum	
Electrical Resistance:	<1.0 Ohms /square	ASTM D257
Optical Emittance:	≤.045	ASTM E408
Absorptance:	≤.14	ASTM E903 / E490
Elongation:	40%	ASTM D882-91
Shrinkage:	<2.5%	400°C/2 hours (Shrinkage, % MD and TD at 400°C (752°F) maximum MIL-P-46112b)
Moisture Absorption (Polyimide):	4.0% max.	ASTM D-570-92
Outgassing:	TML - WVR < 1.0%; CVCM < 0.1%.	ASTM E595
Shelf Life:	This product shall meet the above specified values for 24 months from the date of manufacture (DOM), provided the material is sealed and stored in the original packaging materials @ 19°C +/- 9°C (65°F +/- 15°F) in 50% RH +/- 10%. After 24 months, it is recommended that the adhesion to steel (Stainless) panel value be re-tested for specification compliance.	
Chemical Salt Spray Resistance:	No visible degradation	ASTM B117 (5% / 168 hrs)

	Imperial	Metric	
Adhesive Thickness (Nominal):	2 mils	51 µm	
Backing Thickness (Film Nominal):	1 mil	25.4 µm	ASTM D374-94-A, B OR C
Total Thickness:	3 mil	76.4 µm	
Tensile Strength:	24,000 psi	1,690 kg/cm^2	ASTM D882-91-A
Yield (Film Nominal):	136 sf/lb	28 m^2/kg	
Weight (Film Nominal):	1.07 oz/yd^2	36.2 g/m^2 (film + adhesive, no liner: 96.5 g/m^2)	
Adhesion to Steel:	20 oz/in	2.2 N/cm	ASTM D3330 (**At or about -45°C the Acrylic PSA will reach a MINIMUM level of peel strength.)
Operating Temperature (intermittent):	-40 to 425°F	-40 to 220°C	*Operating temperatures based on the PSA performance and not the PI film. Temperature ranges per 3M Technical support.
Operating Temperature (Continuous):	-40 to 250°F	-40 to 120°C	

The physical properties listed above are typical values and are not to be construed as specifications. Our suggestions and recommendations for use are based on tests we believe to be reliable. Bron Aerotech does not warrant that the product is fit for any particular purpose. Purchaser must determine suitability of the product for the intended use. Bron Aerotech, Inc. assumes no liability for claims beyond the replacement value of our product proved to be defective. Manufactured for and distributed by Bron Aerotech.

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