

0.5 MIL AMBER POLYIMIDE ESD-SAFE FILM

POLYONICS XF-113 is a 0.5 mil amber polyimide film with a durable ESD-Safe topcoat.

XF-113



FEATURES

- Static dissipative
- REACH and RoHS compliant
- Dimensionally stable at high temperatures
- Chemically resistant
- Heat, cold, solvent and voltage resistant

APPLICATIONS

- Thin, static dissipative wraps, protective layers, and barriers where PSA is not required.

SPECIAL CONSIDERATIONS

- Intended for industrial use only

TECHNICAL DATA

Properties	Test Method	Average Results (Value)	Average Results (Units)
Thickness	ASTM D-1000	0.0008 (20)	Inch (µm)
Surface Resistance	EOS/ESD S.11.11	≥10 ⁴ and ≤10 ⁹ Ohms	
Thermal Conductivity 0.5 mil Polyimide	ASTM F-433-77 (1987)	0.12	W/m•K
Tensile Strength 0.5 mil Polyimide	ASTM D882	138	MPa
Elongation 0.5 mil Polyimide	ASTM D882	35%	@ 20 °C
Volume Resistivity 0.5 mil Polyimide	ASTM D-257	10 ¹²	Ohm-cm
Dielectric Constant 0.5 mil Polyimide	IPCTM-650	4.0	@ 1 MHz
Breakdown Voltage 0.5 mil Polyimide	ASTM D-149	3.0 (0.118)	kV/mil (kV/µm)

DURABILITY TESTING

Properties	Test Method	Test Fluid	Results
Chemical Resistance	MIL-STD-202G, Notice 12, Method 215K MIL-STD-883E, Notice 4, Method 2015.13	Solvent A- 1 part IPA, 3 parts mineral spirits	No visible effect
		Solvent B- 1, 1, 1-Trichloroethane	Solvent deleted per notice 12
		Solvent C- Terpene Defluxer	No visible effect
		Solvent D- Saponifier	No visible effect
Heat/Chemical	Polyonics 80386	Immersed in chemical at 70 °C for 5 min	Image Degradation
		Kyzen Corp. Aquanox SSA 30% aqueous	No degradation
		Re-entry KNI 2000 Terpene 40-45 °C	No degradation
		Alpha Metals 2110 Saponifier 10% aqueous	No degradation
		Isopropanol 99%	No degradation
		Kyzen XJN+, 30%	No degradation
Weathering Test	ASTM G154	-	No visible effect
Temperature Rating	Long Term	-	100 hours at 302 °F (125 °C)
	Operating	-	5 minutes at 500 °F (260 °C)
	Short Term	-	90 seconds at 572 °F (300 °C)
Shelf Life	1 year below 80 °F (27 °C) and 60% R.H.		

All SI units are mathematically derived from U.S. conventional units.

NOTE: All values shown are averages and should not be used for specification purposes. Test data and test results contained in this document are for general information only and shall not be relied upon by POLYONICS customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact POLYONICS for further information.

References: ASTM: American Society for Testing and Materials (U.S.A.) SI: International Systems of Units.

Trademarks: XJN+ & Aquanox SSA-TM is a trademark of Kyzen Corporation RE-ENTRY™ is a registered trademark of EnvironsolvInc.

POLYONICS MATERIAL COMPLIANCE

RoHS (Restriction of Hazardous Substances) EU Directive 2002/95/EC	Limits set forth in Directive 2011/65/EU
REACH (Registration Evaluation and Authorization of Chemicals) EU Directive 1907/2006/EC	Limits set forth in Directive 1907/2006/EC Article 7 (2)
Halogen Free - Restriction use of Halogen (IEC 61249-2-21)	Limits set forth in International Electrochemical Commission

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May 2019



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