

## 1 MIL POLYIMIDE FR TAPE

POLYONICS XT-621 is a single coated, 1 mil (25 µm), die-cuttable, amber polyimide, high-temperature insulation tape that incorporates flame retardant technology. It includes a 1 mil (25 µm) ultra-high temperature pressure sensitive white silicone adhesive and fluorinated polyester (PET) liner.

XT-621



### FEATURES

- RoHS compliant
- UL94 VTM-0 Flame Retardant
- Halogen-free flame retardant
- Dimensionally stable at ultra-high temperatures
- Chemically resistant
- Heat, cold, solvent and voltage resistance

### APPLICATIONS

- Insulating and isolating die cut parts used in electrical, electronics, automotive, aerospace and medical industries where the propagation of fire needs to be prevented.
- Electrical insulation meeting NEMA class H requirements (180 °F to 356 °F ; 82 °C to 180 °C)
- Low profile thermal masks for the protection of gold fingers of PCBs during wave soldering, solder dip or hot air leveling (HAL)
- Ultra-high or peak temperature thermal barrier

### SPECIAL CONSIDERATIONS

- Intended for industrial use only
- The surface on which the tape is applied should be clean, dry and free of any contamination, such as dust, oil or rust. Isopropyl alcohol is recommended to clean the surface.
- Use firm pressure when applying tape to increase the physical contact of the adhesive with the surface.
- Pressure sensitive adhesives will provide stronger bonds to warm surfaces by increasing adhesive flow and peel strength.

**TECHNICAL DATA**

Properties	Test Method	Average Results (Imperial Units)	Average Results (SI Units)
<b>Thickness</b>	ASTM D-1000		
<i>Film</i>		1 mil	25 µm
<i>Adhesive</i>		1 mil	25 µm
<i>Total</i>		2 mil	50 µm
<b>Dielectric Breakdown</b>	ASTM D-149	> 7.6 kV/mil	> 299 kV/mm
<b>Adhesion</b>	Polyonics 80313		
<i>Stainless Steel</i>	20 minute dwell	≥ 40 oz/in	≥ 44 N/100 mm
	24 hour dwell	≥ 44 oz/in	≥ 48 N/100 mm
<b>Shear</b>	SAFT ASTM D4498	> 280 °F (138 °C)	
<b>Tack</b>	Polyonics 80155	≥ 2000 g/in	≥ 78 g/mm
<b>Flammability<sup>1</sup></b>	UL94 Standard		
	VTM-0 Rating	Pass	
	V-0 Rating	Pass (Aluminum Substrate)	
<b>Temperature Range</b>	Short Term	-100 °F to 1000 °F	-73 °C to 537 °C
<b>Low-Outgassing</b>	TML (%)	0.71	
	CVCM (%)	0.01	
	WVR (%)	0.83	
<b>Shelf Life</b>	6 months below 80 °F (27 °C) and 60% R.H.		

<sup>1</sup>Tested to the UL94 standard by Polyonics

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. Adhesion and tack values have a 15% tolerance allotted to the values stated. 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.

## POLYONICS MATERIAL COMPLIANCE

RoHS (Restriction of Hazardous Substances) EU Directive 2002/95/EC	Limits set forth in Directive 2011/65/EU
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## WARRANTY-LIMITATION

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September 2019



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