

ENGINEERED TAPES



POLYONICS[®]

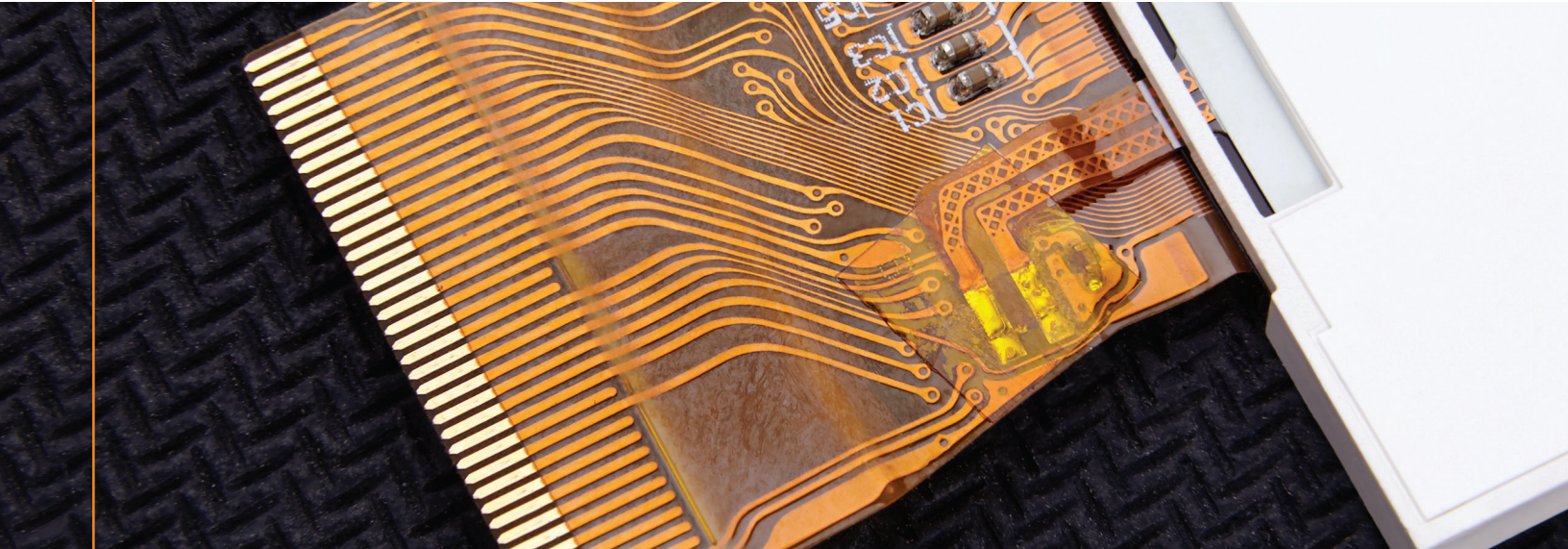
Personal Chemistry

UNIQUELY ENGINEERED TAPES FOR

EXTREME APPLICATION CHALLENGES

Polyonics® engineered tapes are designed with high-performance polymer technology to help you solve the many challenges associated with extreme static charge, high temperature, and other harsh environments. Our tapes are designed to mask, insulate, isolate, bond and protect your sensitive, precise and expensive components and devices.

The Polyonics family of engineered tapes include single- and double-coated bonding and assembly, ESD-Safe, flame retardant, removable and adhesive transfer tapes with specially formulated acrylic and silicone pressure sensitive adhesives (PSAs) and liners for die cutting.



BONDING IN HARSH ENVIRONMENTS

Polyonics double-coated bonding and assembly tapes are ideal for assembling components in high temperature and harsh environments, eliminating the need for mechanical fasteners and driving down product costs. They are available in a variety of thicknesses of polyimide with acrylic PSAs that provide strong, thin conformal bond lines.

ESD PROTECTION ALL THE WAY AROUND

Polyonics ESD-Safe tapes combine surface resistances of 10^4 to 10^9 ohms and low charging (< 125 volts) properties to provide full 360-degree ESD protection for ESD sensitive (ESDS) devices.

Their durable topcoat surfaces incorporate a variety of specially formulated conductive elements that help dissipate charges and further protect ESDS devices, and their low charging PSAs reduce the chance of charged insulators damaging those devices during liner removal, tape application and tape removal.

These materials have proven to help solve some of the most extreme electrostatic problems arising from human contact (HBM) and charged devices (CDM). Polyonics ESD-Safe tapes are ideally suited for specialty die cut applications in the electronics, automotive, aerospace and medical industries, and comply with the ANSI/ESD S541 packaging guidelines as part of the ANSI/ESD S20.20 ESD requirements for ESD protected areas (EPA).

GUARDING AGAINST HIGH TEMPERATURES AND FIRE

Polyonics halogen-free, flame-retardant tapes engineered with proprietary FlameGard technology combine several chemical and physical mechanisms to effectively control heat transfer, oxygen availability, material decomposition and the generation of flammable gases to help prevent the propagation of fire. We've developed a wide variety of flame retardant tapes to address a spectrum of applications, including bonding systems. Polyonics' flame-retardant tapes are tested to the UL94, FAR 25.853 and BSS 7238/7239 standards for compliance.

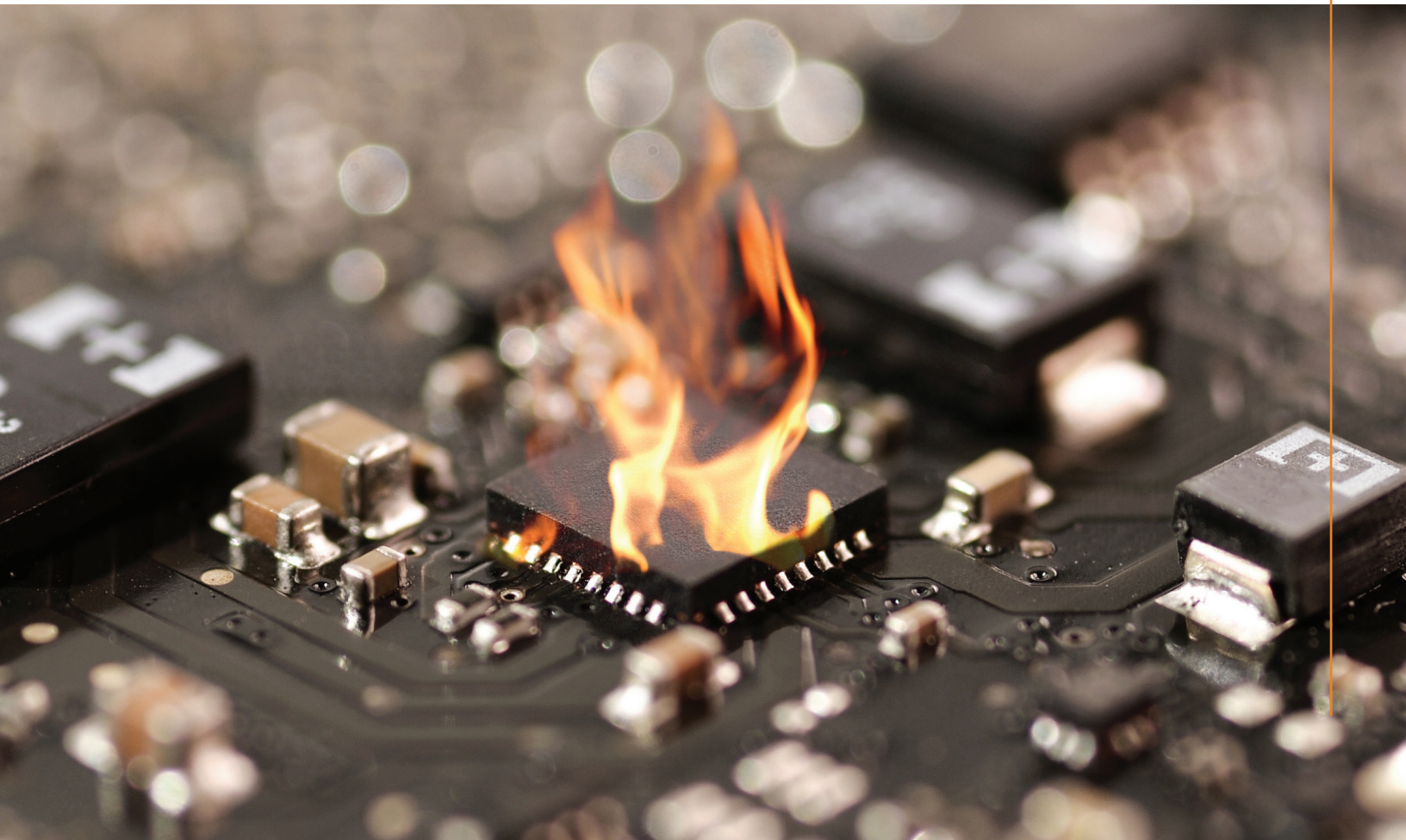
REMOVE THE RISK OF DAMAGE TO YOUR ESDS DEVICES

Polyonics low-charging (< 125 volts) acrylic and silicone based removable masking tapes are

designed with low charging PSAs, safeguarding ESDS devices and/or circuits against the immediate or latent damaging effects of charged insulators created during liner removal and if-and-when the tapes are removed from the PCB surface post process.

HIGH-PERFORMANCE ADHESIVE TRANSFER TAPES

The unique properties of Polyonics adhesive transfer tapes make them ideal for use in high temperature and harsh environment applications. They have thin profiles while still providing high bond strength, high temperature and chemical resistances. Our adhesive transfer tapes are offered in high temperature acrylic and ultra-high temperature silicone, and are supplied with double liners for ease of handling and die cutting.



POLYONICS ENGINEERED TAPES PRODUCT LINE

Type	Film	Product	Adhesive	Clean Removable after Reflow	Static Dissipative	Low-Charging (< 125 V)	Flame Retardant	High Opacity	Low-Outgassing Tested	Temperature	
Single Coated Tape	0.5 mil (13 µm) Polyimide	XT-701	1 mil (25 µm) Acrylic							-40 °F to 572 °F (-40 °C to 300 °C)	
	0.5 mil (13 µm) Black Polyimide	XT-702	1 mil (25 µm) Acrylic					✓			
	1 mil (25 µm) Polyimide		XT-620	1 mil (25 µm) Acrylic						✓	-99 °F to 999 °F (-73 °C to 537 °C)
			XT-621	1 mil (25 µm) White Silicone				✓			
		XT-622	1 mil (25 µm) Acrylic	✓	✓					-40 °F to 572 °F (-40 °C to 300 °C)	
		XT-624	1 mil (25 µm) Acrylic				✓				
		XT-626	1 mil (25 µm) Acrylic	✓	✓	✓					
		XT-706	1 mil (25 µm) Acrylic			✓					
		XT-707	1 mil (25 µm) White Silicone			✓				-99 °F to 999 °F (-73 °C to 537 °C)	
		XT-790	1 mil (25 µm) Silicone	✓						-100 °F to 500 °F (-73 °C to 260 °C)	
	1 mil (25 µm) Black Polyimide	XT-722	1 mil (25 µm) Acrylic					✓		-40 °F to 572 °F (-40 °C to 300 °C)	
	1 mil (25 µm) Clear Polyester	XT-637	1 mil (25 µm) Acrylic		✓	✓				-40 °F to 302 °F (-40 °C to 150 °C)	
	2 mil (50 µm) Polyimide		XT-623	1.5 mil (38 µm) Acrylic		✓	✓				-40 °F to 572 °F (-40 °C to 300 °C)
			XT-625	1 mil (25 µm) Acrylic				✓			
		XT-718	1 mil (25 µm) Acrylic			✓					
	2 mil (50 µm) Matte Black Polyimide	XT-719	1.5 mil (38 µm) Acrylic		✓	✓	✓	✓			
	2 mil (50 µm) White Polyester	XT-692	1 mil (25 µm) Acrylic		✓	✓				-40 °F to 302 °F (-40 °C to 150 °C)	
	2 mil (50 µm) Aluminum		XT-629	1 mil (25 µm) Acrylic							-40 °F to 572 °F (-40 °C to 300 °C)
XT-630			1 mil (25 µm) White Silicone				✓			99 °F to 999 °F (-73 °C to 537 °C)	
XT-631		1 mil (25 µm) Acrylic				✓					
Double Coated Tape	1 mil (25 µm) Polyimide	XT-636	1 mil (25 µm) Acrylic (x2)							-40 °F to 572 °F (-40 °C to 300 °C)	
		XT-657	1 mil (25 µm) Acrylic (x2)				✓				
	2 mil (50 µm) Polyimide	XT-654	1 mil (25 µm) Acrylic (x2)								
		XT-679	1.7 mil (43 µm) Acrylic (x2)				✓				
Transfer Adhesive	N/A	XA-1020	1 mil (25 µm) Ultra High Temperature White Silicone				✓			Short Term (< 15 min): up to 707 °F (375 °C) Long Term (> 6 hrs): up to 455 °F (235 °C)	
		XA-1030	1 mil (25 µm) High Temperature Acrylic							Short Term (< 15 min): up to 500 °F (260 °C) Long Term (> 6 hrs): up to 347 °F (175 °C)	
		XA-1031	1.5 mil (38 µm) High Temperature Acrylic							Short Term (< 15 min): up to 500 °F (260 °C) Long Term (> 6 hrs): up to 347 °F (175 °C)	

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