

## STRETCHING THE FUTURE OF ELECTRONIC MATERIALS



**BEYOLEX™**

## BEYOLEX™ Thermosetting Stretchable Substrate Film

This novel soft circuit material is designed for flexible, stretchable, conformable and pliable printed electronics applications. It is a unique material based on a proprietary, thermoset, non-silicone polymer system which provides outstanding performance.

### Features and Benefits

- Good Elongation
- Ultra Low Hysteresis
- High Temperature Resistance
- High Environmental Stability
- Compatible With Wide Variety of Functional Inks

### Typical Printed Electronic Applications

- Pliable/ Stretchable PCB
- Sensors
- Health And Wellness
- Robotics
- Aerospace
- Automotive



## Typical Properties

Properties		Test Method*	Unit	BEYOLEX™ MUAS13111AA
Elongation	Initial	ASTM D822	%	> 200
	Aft. High Temp & High Humid Test**			> 200
	Aft. Heat Cycle***			> 200
Modulus@50% Strain	Initial	ASTM D822	MPa	< 2.5
	Aft. High Temp & High Humid Test**			< 2.5
	Aft. Heat Cycle***			< 2.5
Hysteresis	Initial	Panasonic Original	%	< 0.1
	Aft. High Temp & High Humid Test**			< 0.1
	Aft. Heat Cycle***			< 0.1
Heat Resistance		TG/DTA(@Air)/ 5% weight loss	°C	302
Breakdown Voltage		IEC 60243-1	KV/mm	98
Dielectric Property(Dk/Df)	IPC TM650 2.5.5.10	@10GHz	-	2.8 / 0.052
		@2GHz	-	3.3 / 0.073
Transparency		ISO 13468-1	%	> 90
Stretch Cycle		50% stretch	cycle	> 10,000

### North America

205 Ravendale Dr,  
Mountain View, CA, 94043  
Tel: +1-408-861-3946  
Contact: Tomohiro Fukao  
[emd@us.panasonic.com](mailto:emd@us.panasonic.com)

### Europe

Caroline-Herschel-Strasse 100, 85521  
Ottobrunn, Germany  
Tel: +49-151-74114697  
Contact: Tsuyoshi Takeda  
[tsuyoshi.takeda@eu.panasonic.com](mailto:tsuyoshi.takeda@eu.panasonic.com)

### Japan

1006 Oaza Kadoma,  
Kadoma, Osaka, 571-8506  
Tel: +81-6-6908-1101  
Contact: Kaori Miyazaki  
[miyazaki.kaori@jp.panasonic.com](mailto:miyazaki.kaori@jp.panasonic.com)

\* Measurements are compliant with the standards other than Panasonic's original test.

\*\* Test Condition : 85°C / 85%RH / 1000h

\*\*\* Test Condition : -55°C(5min) ↔ 125°C(5min) / 1000cyc.

The values in this document are representative measured properties and not specifications or guarantees of performance.

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