

BEYOLEX™ Thermosetting Stretchable Film

This novel polymer substrate 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

- Sensors
- Health And Wellness
- Automotive
- Aerospace
- Structural Electronics



Typical Properties

Properties	Test Method*	Unit	BEYOLEX™
Elongation	Initial		> 200
	Aft. High Temp & High Humid Test **	ASTM D822	%
	Aft. Heat Cycle ***		> 200
Modulus @ 50% Strain	Initial		< 2.5
	Aft. High Temp & High Humid Test **	ASTM D822	MPa
	Aft. Heat Cycle ***		< 2.5
Hysteresis	Initial		< 0.1
	Aft. High Temp & High Humid Test **	Panasonic Original	%
	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		%	> 90
Stretch Cycle	50% stretch	cycle	> 10,000

* 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

North America
205 Ravendale Dr,
Mountain View, CA, 94043
Tel: +1-408-861-3946
Contact: Tomohiro Fukao
emd@us.panasonic.com

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

Japan
1006 Oaza Kadoma,
Kadoma, Osaka, 571-8506
Tel: +81-6-6908-1101
Contact: Masato Minami
minami.masato@jp.panasonic.com

Disclaimer

This material is provided strictly on an as-is basis. No warranty shall be given by Panasonic with regard to the material, including, but not limited to the quality, safety, fitness for a particular purpose, merchantability, or compatibility with other materials and devices. Panasonic shall have no obligation, liability or responsibility to you or any third parties/individuals for any damage arising out of or incurred in relation to this material.

Usage Policy

The use of the Panasonic Products for weapons of mass destruction (including missiles, chemical weapons, biological weapons, nuclear weapons) is strictly prohibited. Please contact us firstly if you intend to use the material for any applications of (i) aerospace usage including aircraft and spacecraft; (ii) weapon or other military usage; or (iii) the medical instruments or products that are applied to human body. Panasonic will conduct the preliminary review in accordance with our company policy before we decide to start the supply of the material.