Panasonic Beyolex™ film is a novel polymer substrate designed for flexible, stretchable, conformable and pliable printed electronics applications. This unique material is 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
<table>
<thead>
<tr>
<th>Part Number</th>
<th>MUAS13111AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Sheet</td>
</tr>
<tr>
<td>Size</td>
<td>210mm(L) x 300mm(W)</td>
</tr>
<tr>
<td>Number of sheets</td>
<td>5 Sheets/pkg</td>
</tr>
</tbody>
</table>

**Structure**

- **Top view**
  - *Side of 25umt PET*
  - *A Label to peel cover film off is on top side*

![Top View Diagram](image)

- **Side View**
  - 25 µm PET (cover film)
  - 100 µm Stretchable Film Beyolex™
  - 75 µm PEN (carrier film)

![Side View Diagram](image)

- Please contact Panasonic on Custom sheets, and sizes including roll

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Storage

- Store this Product in clean, dry, indoor environment
- Maintain a temperature of <25°C

Processing

Prepare Beyolex™ Film

Remove cover film

Print functional ink and dry

Remove carrier film

- Product label is on the cover film.
- Use the label to peel cover film off.
- A surface–treated screen mask is recommended to mitigate the surface tack of the film.
- Functional inks include: Conductive Paste, Carbon Paste, Insulation Paste etc.
- Recommended curing below 160°C
- Recommended to keep carrier film in place for mechanical support until all processing is completed.
### Typical Properties

<table>
<thead>
<tr>
<th>Properties</th>
<th>Test Method*</th>
<th>Unit</th>
<th>Beyolex™</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation</td>
<td><strong>Test Condition : 85°C / 85%RH / 1000h</strong> &lt;br&gt;<strong>Test Condition : -55°C(5min) ↔ 125°C(5min) / 1000cyc</strong> &lt;br&gt;<strong>• The values in this document are representative measured properties and not specifications or guarantees of performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modulus @50% strain</td>
<td><strong>Test Condition : 85°C / 85%RH / 1000h</strong> &lt;br&gt;<strong>Test Condition : -55°C(5min) ↔ 125°C(5min) / 1000cyc</strong> &lt;br&gt;<strong>• The values in this document are representative measured properties and not specifications or guarantees of performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hysteresis</td>
<td><strong>Test Condition : 85°C / 85%RH / 1000h</strong> &lt;br&gt;<strong>Test Condition : -55°C(5min) ↔ 125°C(5min) / 1000cyc</strong> &lt;br&gt;<strong>• The values in this document are representative measured properties and not specifications or guarantees of performance</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*Measurement 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**

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

Panasonic Beyolex™ Part Number MUAS13111AA (“Product”) is provided strictly on an as-is basis. No warranty shall be given by Panasonic with regard to the Product, 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 the Product.

Please consult with Panasonic before specifying or qualifying the Product for any commercial applications. Warrantees may be provided for specific customer and application usage on a case-by-case basis after consultation and approval from Panasonic.

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 Product 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 Product.
For more information on how Panasonic can assist you with your application needs, contact your local authorized Panasonic Representative

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