Smart Seal, Good Feel

LEADING-EDGE HOT MELT SEALANTS FOR INSULATING GLASS UNITS
SMART SEALANTS FOR INSULATING GLASS UNITS

How sealants contribute to the overall performance of Insulating Glass Units

- **Thermal efficiency** - The gas retention and warm edge effect of the sealants determine energy ratings
- **Barrier properties** - Sealants keep moisture out to prolong the service lifespan of IGUs
- **Processability** - Choose the right technology, as some require mixing, purging and curing times
- **Safety** - Avoid harmful substances for a safer home and workplace

Hot melt sealants: the leading-edge technology chosen by Bostik

With over 35 years of experience in the manufacture of Insulating Glass sealants, Bostik has grown to become a market leader having put its faith in hot melt technology:

- Unparalleled product performance and processability
- Comprehensive product line: primary & secondary sealants
- Dedicated R&D team and expert technical support focused on product innovation and on helping customers with continuous improvement to get the best out of our products.

Member of reference associations

- **GGF**: Glass and Glazing Federation
- **IGMA**: Insulating Glass Manufacturers Alliance

Compliant with globally-recognised standards:

- **ASTM**
- **CEKAL** (registration for selected products)
- **EN 1279-2&3 (system)** / **EN 1279-4 (sealant)**

Each year over 50,000,000 insulating glass units are manufactured using Bostik hot melt sealants globally – equivalent to twice around the world in linear metres!
Bostik's hot melt sealants not only bring the best value to IGU manufacturers but also to their end-users.

**Adaptive**
- Manual or automated application
- Compatible with all spacer technologies and window shapes

IGU manufacturers can be more flexible by using different methods of manufacture, line speeds and workforce. Gains in productivity are achieved thanks to better sealant processability.

**Fast**
- No purging therefore no waste, every gram of product used
- Instant seal, no curing time required

Improved productivity with IGU assembled and ready to handle in less than 5 minutes and ship in 30 minutes (while reactive technologies can take up to 24 hours).

**Efficient**
- Thermal conductivity less than 0.25 W/m·K

Best thermal insulation properties for comfort and energy saving.

**Durable**
- Low argon gas permeation and moisture vapour transmission rates

Long-lasting units with up to 20 years warranty from IGU and window manufacturers.

**Safe**
- No mixing or curing time needed
- FREE of hazardous substances: isocyanates / heavy metals / plasticisers

» Safer workplace for manufacturers
» Safer materials at home
» Compliance with regulatory restrictions for sustainable development
APPLICATION METHODS

Manual application
» Melt on demand & extrude using hand-held gun
» Instant seal with no curing
» No purging, no waste
» Compatible with all window shapes

Automated-line application
» High-speed robotic application ready
» Application cycle time as low as 16 seconds for 600 mm x 900 mm units
» Lean manufacturing:
  • Fast turn-around with “no curing”
  • No waste
» Workplace efficiency improved

TECHNICAL PERFORMANCE

Sealant barrier performance comparison

Bostik’s hot melt technology provides the best-in-class performance for enhanced gas retention and moisture barrier and longer unit durability.

<table>
<thead>
<tr>
<th>Sealants</th>
<th>Moisture Vapour Transmission Rate</th>
<th>Argon Gas Permeation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bostik sealants</td>
<td>X0.06</td>
<td>X0.003</td>
</tr>
<tr>
<td>Standard Hot Melt Butyl</td>
<td>X1</td>
<td>X4</td>
</tr>
<tr>
<td>Polyurethane (2-parts)</td>
<td>X45</td>
<td>X10</td>
</tr>
<tr>
<td>Polysulfide (2-parts)</td>
<td>X4</td>
<td>X25</td>
</tr>
<tr>
<td>Silicone (2-parts)</td>
<td>X650</td>
<td>X4</td>
</tr>
</tbody>
</table>

Thermal conductivity comparison

Bostik’s hot melt technology offers lower thermal conductivity for an increased warm-edge effect.

<table>
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<th>Sealants</th>
<th>W/m K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Melt Butyl</td>
<td>0.24</td>
</tr>
<tr>
<td>Polyurethane</td>
<td>0.30</td>
</tr>
<tr>
<td>Polysulfide</td>
<td>0.40</td>
</tr>
</tbody>
</table>
OUR RANGE OF HOT MELT SEALANTS

BOSTIK 2000
Primary sealant
Compounded PIB (Polyisobutylene)
Offers **excellent adhesion** to the spacer with **low moisture vapour transmission rate**.
Fully compatible with most 1-part and 2-part secondary sealants available on the market.

<table>
<thead>
<tr>
<th>Relative Density</th>
<th>Approx. 1.16 - 1.2 g/cm³</th>
</tr>
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<tbody>
<tr>
<td>Moisture Vapour Transmission Rate</td>
<td>&lt; 0.07 g/m² per day for 2 mm film at 25 °C (77 °F), 100 % RH (ASTM method E96)</td>
</tr>
</tbody>
</table>

Packaging
• 7 kg slugs
• 200 kg drums

BOSTIK 5000
Secondary sealant
Single part butyl rubber-based hot melt
Offers **best-in-class moisture vapour transmission rate properties** with **unparalleled processability** for the most demanding applications.

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<tr>
<td>Moisture Vapour Transmission Rate</td>
<td>&lt; 0.1 g/m² per day for 2 mm film at 25 °C (77 °F), 100 % RH (ASTM method E96)</td>
</tr>
</tbody>
</table>

Packaging
• 200 kg fibre drum
• 200 kg steel drum
• 6.5 kg block

NEW IN 2018

BOSTIK 6000
Secondary sealant
Single part butyl rubber-based hot melt
**Bostik 6000 with i-Boost™ Technology** is the next generation of single part hot melt butyl sealants for the production of insulating glass units.
- Improved mechanical properties
- Higher temperature resistance
- Enhanced productivity

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<tr>
<td>Moisture Vapour Transmission Rate</td>
<td>0.06 g/m² per day for 2 mm film at 25 °C (77 °F), 100 % RH (ASTM method E96)</td>
</tr>
</tbody>
</table>

Packaging
• 200 kg fibre drum
• 200 kg steel drum
• 6.5 kg block
IMPORTANT – PLEASE READ BEFORE USING THIS BROCHURE

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