Insulating Glass-Sealant PIB-29
Black Primary Seal for Commercial IG

Description
Insulating Glass-Sealant PIB-29 is a black polyisobutylene based sealant that exhibits excellent long-term stability and remains permanently flexible, even at low temperatures. Like all Insulating Glass-Sealant PIB sealants, Insulating Glass-Sealant PIB-29 exhibits low argon permeability and inherently low moisture vapor transmission along with excellent adhesion to aluminum, stainless steel and tin-plated steel spacer substrates.

Basic Use
Insulating Glass-Sealant PIB-29 is specifically formulated to be used as a primary sealant in insulating glass units for commercial construction. PIB-29 is compounded with high levels of carbon black to provide maximum protection in exposed application such as direct glazing.

Insulating Glass-Sealant PIB-29 has very low moisture vapor transmission rates (MVTR) and gas permeability rates. Properly constructed dual-seal units incorporating Insulating Glass-Sealant PIB-29 will retain argon insulating gas and maintain a dry interior unit airspace for decades. Insulating glass units produced with Insulating Glass-Sealant PIB-29 routinely pass ASTM E2188, E2189, E2190 (HIGS) standards.

Insulating Glass-Sealant PIB-29 offers high application rates without sacrificing strength performance. Optimized for performance on European assembly equipment (Bystronic and Lisec), Insulating Glass-Sealant PIB-29 will also run well on manual extruders. PIB-29 may be used with most commercially available urethane, silicone, polysulfide, or butyl hot melt insulating glass secondary sealants.

Health & Safety
Prior to working with this or any product consult product label and Safety Data Sheet (SDS) for necessary health and safety precautions.

Features
- Low moisture vapor transmission rate (MVTR)
- Excellent resistance to weathering
- Low gas permeability
- Excellent adhesion to glass, stainless, aluminum, tin-plated steel, and many plastics
- Ultra low volatile content
- Lower press flow viscosity

Benefits
- Increases unit life expectancy
- Does not degrade upon exposure to environmental conditions
- Increases argon gas retention beyond industry standards
- Can be used with all commercially accepted metal spacer systems and most plastic spacer systems
- No chemical fogging. No discoloration of low-e coatings
- Suitable for high-volume fully automated production lines

Packaging
Insulating Glass-Sealant PIB-29 is available in the following standard packages:

<table>
<thead>
<tr>
<th>Part #</th>
<th>Physical Form</th>
<th>Package</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB-059B-58</td>
<td>14.5 lb (6.6 kg) slug</td>
<td>4 slugs/case</td>
<td>58 lb/ case</td>
</tr>
<tr>
<td>PB-059B-430S</td>
<td>Solid drum</td>
<td>Steel drum</td>
<td>430 lb</td>
</tr>
</tbody>
</table>

Storage and Shelf Life
Store material in original unopened packaging at temperatures between 4°C to 38°C (40°F to 100°F). Shelf life is 24 months when stored as recommended.
**Limitations**

- **Insulating Glass-Sealant PIB-29** is not intended for use as a structural sealant.
- **Insulating Glass-Sealant PIB-29** is not resistant to attack by solvents, oils, and plasticizers. When constructing IG with silicone secondary sealants, care must be taken to insure that the glazing environment (including setting blocks, compression gaskets, glazing sealants, and weatherproofing sealants) is free from solvents, oils and plasticizers. These chemicals can migrate through silicone secondary sealants and attack the primary sealant resulting in premature IG unit failure.
- The surfaces to be bonded must be dry, clean and free from dust and grease. Glass surfaces should be thoroughly cleaned by hand or machine with non-film forming, low residue detergent and rinsed thoroughly with clean hot water.

**Glazing Compatibility**

It is recommended that glazing materials be tested for compatibility and that all units be glazed in accordance with GANA (Glass Association of North America) and IGMA (Insulating Glass Manufacturers Alliance) recommendations. Contact with any solvent, oil, or plasticizer-containing glazing materials should be avoided.

**Performance Standards**

Insulating glass units incorporating **Insulating Glass-Sealant PIB-29** routinely meet the following specifications:

- ASTM E 774
- ASTM E 2188, E2189, E2190 (HIGS)
- CGSB 12.8
- EN 1279 (Part 1-3)

**Application Instruction**

See **Insulating Glass-Sealant PIB Application Guidelines**

---

**Technical Data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Typical Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture Vapor Transmission</td>
<td>0.09 g/m²/24 hr</td>
<td>ASTM F1249 2mm thickness</td>
</tr>
<tr>
<td>Argon Diffusion</td>
<td>0.02 L/m²/24h/760mm</td>
<td>ASTM D3985 3mm thickness</td>
</tr>
<tr>
<td>Press Flow Extrusion Viscosity</td>
<td>13 seconds</td>
<td>ASTM D2452 110°C (230°F), 8.6mm orifice</td>
</tr>
<tr>
<td>Service Temperature</td>
<td>-45°C to 80°C (-50°F to 176°F)</td>
<td></td>
</tr>
</tbody>
</table>

**Physical Properties**

- Cone Penetration: 55 dmm ASTM D217, 150g added load
- Solids Content: 100%
- Specific Gravity: 1.10 ASTM D71
- Weight per gallon: 9.2 lb

**Application Properties**

- Suggested Application Temperature: 100°C to 130°C (212°F to 265°F)

**NOTE:** The foregoing information is published as general information only. The listed properties and performance characteristics are approximate values and are not to be interpreted as manufacturing specifications.

---

**Insulating Glass-Sealant PIB-29 20140801**

**Warranty:** Royal warrants its products to conform to Royal’s specifications at the time of sale when tested according to Royal standards. If a product is proven to be defective when tested according to Royal standards, Royal will, at its option, refund the purchase price or replace or repair the defective product. THIS LIMITED WARRANTY IS THE BUYER’S SOLE AND EXCLUSIVE REMEDY AGAINST ROYAL AND IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall Royal be liable for any special, incidental, consequential, or punitive damages arising out of any claims whether based on negligence, contract, warranty, strict liability or otherwise.