

Insulating Glass-Sealant PIB-1

Black Primary Seal for Dual-Seal
Horizontal Assembly

Description

Insulating Glass-Sealant PIB-1 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, **PIB-1** 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-1 is specifically formulated to be used as a primary sealant in insulating glass units which are produced via horizontal or stacked methods. **PIB-1** compression properties have been optimized to provide sufficient wet-out after pressing while minimizing over-compression issues in a bottom-of-the-stack unit. **PIB-1** exhibits reduced flow versus other PIB offerings when submitted to a set pressure.

PIB-1 has very low moisture vapor transmission rates (MVTR) and gas permeability rates. Properly constructed dual-seal units incorporating **PIB-1** will retain argon insulating gas and maintain a dry interior unit airspace for decades. Insulating glass units produced with **PIB-1** routinely pass ASTM E2188, E2189, E2190 (HIGS) standards.

PIB-1 is designed for use on manual extrusion equipment. **PIB-1** 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.

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CAUTION: All statements and technical information in this document are based on tests or data that Royal believes is reliable. However, Royal does not warrant or guarantee the accuracy or completeness of this information. The user has sole knowledge and control of factors that can affect the performance of Royal's products in the user's intended application. It is the user's responsibility to conduct tests to determine the compatibility of Royal's product with the design, structure, and materials of the user's end product and the suitability of Royal's product for the user's method of application and intended use. The user assumes all risk and liability arising out of such use.



Features

Superior compression resistance

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

High cohesive strength

Benefits

Allows for stacking of window units during build without increased risk of failure

Increased unit life expectancy

Does not degrade upon exposure to environmental conditions

Increased 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

Reduced offset shear failures resulting in less rework and better in-plant unit handling

Packaging

Insulating Glass-Sealant PIB-1 is available in the following standard packages:

- 15lb (6.8kg) slug

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

- ADCOTHERM® PIB-1 is not intended for use as a structural sealant.
- ADCOTHERM® PIB-1 is not intended for use on fully-automated, high-volume extruders.
- ADCOTHERM® PIB-1 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

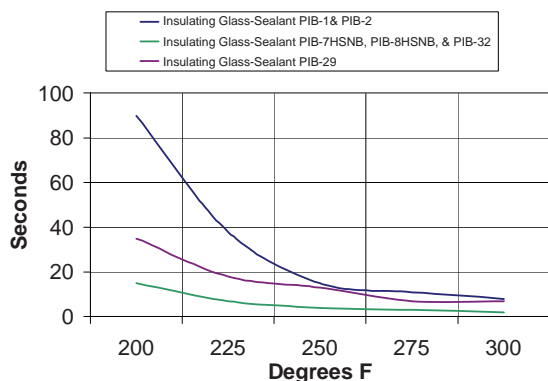
Insulating glass units incorporating **PIB-8HSNB** routinely meet the following specifications:

- 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**

Press Flow Extrusion Viscosity
ASTM D-2452



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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 BUYERS 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.



| Technical Data | | |
|-----------------------------------|--------------------------------------|---|
| Property | Typical Value | Test Method |
| Moisture Vapor Transmission | 0.2 g/m ² /24 hr | ASTM F1249 2mm thickness |
| Argon Diffusion | 0.02 L/m ² /24h/ 760mm | ASTM D3985 3mm thickness |
| Press Flow Extrusion Viscosity | 26 seconds | ASTM D2452 110°C (230°F), 8.6mm orifice |
| Service Temperature | -45°C to 80°C (-50°F to 176°F) | |
| Physical Properties | | |
| Cone Penetration | 45 dmm | ASTM D217, 150g added load |
| Solids Content | 100% | |
| Specific Gravity | 1.16 | ASTM D71 |
| Weight per gallon | 9.66 lb | |
| Application Properties | | |
| Suggested Application Temperature | 110°C to 140°C (230°F to 285°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.

IGMA MEMBER
INSULATING GLASS MANUFACTURERS ALLIANCE



ISO 9001
REGISTERED
TS 16949