



Isolast® PureFab™ JPF40



Specialty engineered ultra-high temperature perfluoroelastomer for demanding subfab applications and thermal processes

Isolast® PureFab™ JPF40 is an ultra-high temperature perfluoroelastomer (FFKM) developed for demanding subfab applications and thermal processes, including rapid thermal processing (RTP), atomic layer deposition (ALD), oxidation, and low pressure chemical vapor deposition (LPCVD).

The material offers unrivalled long-term compression set performance from +200 °C/+392 °F to +300 °C/+552 °F to ensure sealing integrity for critical processes.

Isolast® PureFab™ JPF40 can withstand application temperatures up to +327 °C/+621 °F. It also has excellent media resistance and is compatible with a wide range of chemicals.

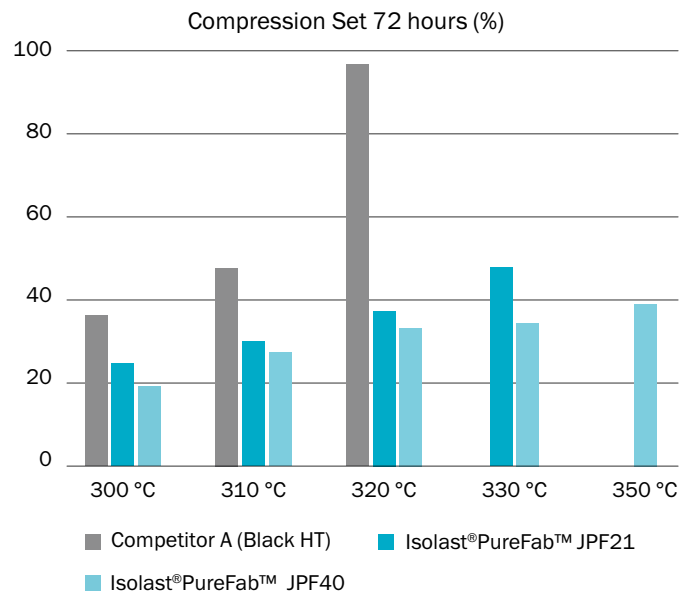
Special Features

- Unique cross-linking chemistry provides a low compression set for long time periods ensuring sealing integrity
- Unrivalled thermal stability up to +327 °C/+621 °F
- Low outgassing properties
- Very low trace metal contamination compared to other high temperature, black FFKMs
- Excellent chemical compatibility with common dry process gases
- Minimum particulation and weight loss upon exposure to a wide range of plasma process gases

Typical Applications

- Oxidation, RTP
- Deposition: LPCVD, ALD
- Subfab: vacuum pumps and exhaust lines
- Vacuum and exhaust flange seals
- Ideal for use in combination with Isolast® K-Fab™ flange seals
- Furnace door seal

High Temperature Performance

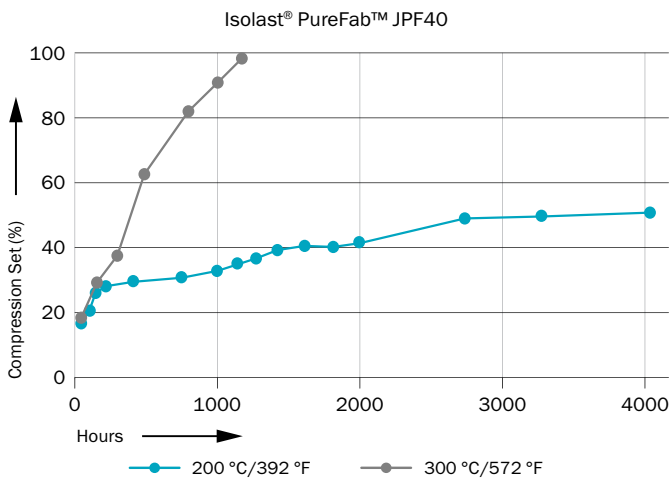


* Materials not shown, failed at higher temperatures

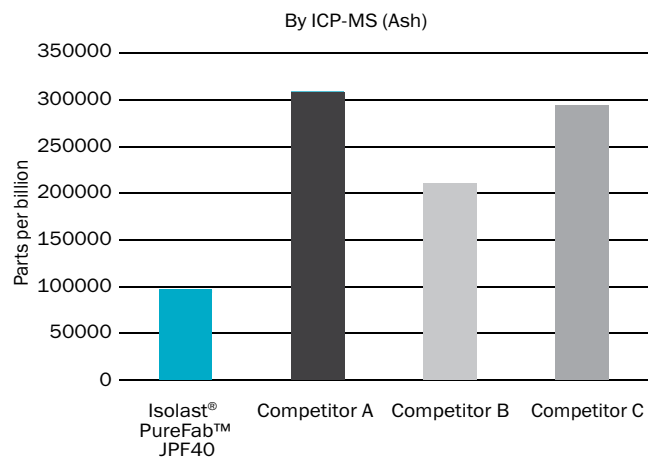
| General Data | JPF40 |
|----------------|-------|
| Elastomer Type | FFKM |
| Color | Black |

| Properties | Test Method | Results |
|--------------------------------|-------------|-----------------------|
| Hardness (Shore A) | D2240 | 75 |
| Tensile Strength (MPa) | D1414 | 18.7 |
| Elongation at Break (%) | D1414 | 127 |
| Modulus 100% (MPa) | D1414 | 12.5 |
| Compression Set (%) | | |
| 72h @ +200 °C/+392 °F | D395 | 16 |
| 72h @ +300 °C/+572 °F | | 18 |
| Continuous Service Temperature | | Up to +327 °C/+621 °F |

Long-Term Compression Set Performance



Trace Metal Content



Trelleborg Sealing Solutions offers decades of engineering and application experience, as well as the latest knowledge in the design of high precision, customized sealing solutions for critical semiconductor applications.

The Isolast® PureFab™ range provides a unique and focused material portfolio to match the process chemistry, system location and tool complexity of demanding semiconductor environments, delivering the ultimate in high purity sealing performance in plasma and at high temperatures.

Partner with Trelleborg to benefit from local specialist support, global reach and dedicated regional semiconductor experts. These three pillars ensure best in class service levels, from design, prototyping and delivery through to serial production. This industry-leading design support and our digital tools are key assets to accelerate performance.



For more information and contact details scan the QR code or visit www.trelleborg.com/seals

