Leading edge translucent material for critical semiconductor applications

Isolast® PureFab™ JPF30 is a high purity, translucent perfluoroelastomer (FFKM) compound designed for the most critical semiconductor applications. The material offers a market leading compression set performance compared to other unfilled-translucent FFKM materials. This means that Isolast® PureFab® JPF30 provides long term, robust sealing integrity at temperatures up to +300 °C /+572 °F.

In addition, due to its unfilled formulation, Isolast® PureFab® JPF30 has excellent particle performance for use where elastomer parts have close proximity to wafers.

With a highly chemically resistant polymer backbone combined with proprietary cross-linking technology, the material exhibits outstanding outgassing performance, which makes it the preferred choice for the most critical chamber locations and processes.

Special Features

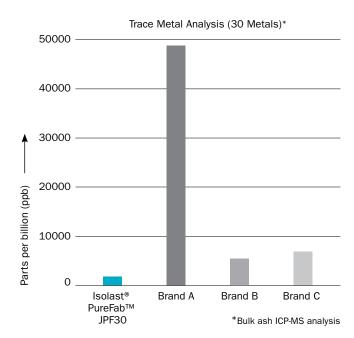
- Non-filled
- Translucent
- Best-in-class compression set and compressive stress relaxation (CSR) performance due to proprietary cross-linking technology
- · Extremely low trace metal content
- Excellent plasma cracking resistance
- Low particle generation
- · Ultra low outgassing
- Excellent chemical resistance
- Unrivalled thermal stability with a continuous service temperature up to +300 °C/+572 °F

Typical Applications

- Etch processes: ALE, dry etch, ashing, stripping
- · Chamber lid seals
- · Gas inlet seals
- · Bonded slit valve doors

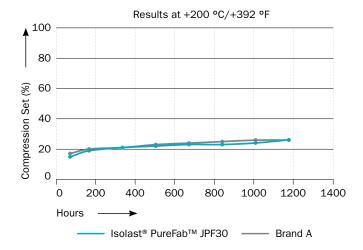
Purity

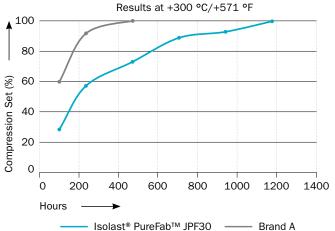
The outstanding purity levels of Isolast® PureFab™ JPF30 helps maintaining high wafer output yields for the most advanced semiconductor processes.



| Properties | Test Method | Results |
|---------------------------------------|-------------|------------------------|
| Hardness (Shore A) | D2240 | 53 |
| Tensile Strength (MPa) | D1414 | 9.1 |
| Elongation at Break (%) | D1414 | 202 |
| Modulus 100% (MPa) | D1414 | 1.37 |
| Compression Set (%) | | |
| 72h @+200 °C/+392 °F | | 15 |
| 72h @+250 °C/+482 °F | D395 | 17 |
| 72h @+300 °C/+572 °F | | 28 |
| Continuous Service Temperature | | Up to +300 °C /+572 °F |

Compression Set





Trelleborg Sealing Solutions offers decades of engineering and applications 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

