Superior chemical compatibility for a wide range of semiconductor applications

Isolast® PureFab™ JPF22 is an excellent all-around perfluoroelastomer (FFKM) suitable for use in a broad range of semiconductor applications.

The material offers outstanding compatibility with wet process chemicals and steam, as well as amine based atomic layer deposition (ALD) precursors. It has very good plasma resistance and particulation performance in a wide range of process gasses.

Isolast® PureFab™ JPF22 is suitable for operating temperatures up to +220 °C/+430 °F. It has outstanding mechanical properties and a low compression set, ensuring long-term sealing performance.

Typical Applications

- Wet processes: electrochemical deposition (ECD), chemical mechanical planarization (CMP), wet etch
- · ECD wafer seals
- Ash/strip
- Chemical vapor deposition (CVD), plasma-enhanced chemical vapor deposition (PECVD)
- · Plasma etch

Special Features

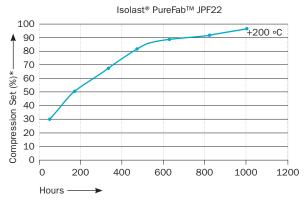
- Reinforcing synthetic filler system maximizes mechanical performance
- Extremely low leachables according to SEMI F40/F57
- Excellent resistance to aggressive, amine-based chemicals
- · Low trace metal content leading to high process yield
- Excellent chemical compatibility with common dry process gasses in less critical processes
- Minimum particulation and weight loss upon exposure to a wide range of plasma process gasses

General Data	JPF22
Elastomer Type	FFKM
Color	Off-white

Properties	Test Method	Results
Hardness (Shore A)	D2240	81
Tensile Strength (MPa)	D1414	26
Elongation at Break (%)	D1414	138
Modulus 100% (MPa)	D1414	17
Compression Set (%)		
72h @ +200 °C/+392 °F	D395	18
Continuous Service Temperature		Up to +220 °C/+428 °F

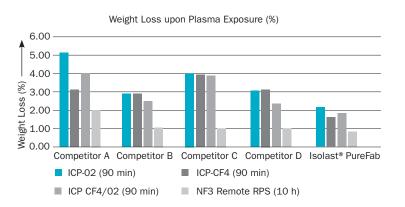
^{*} Test performed on standard buttons

Long-Term Compression Set Performance



* Test performed on AS-214 O-Rings

Plasma Resistance



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/en/seals

