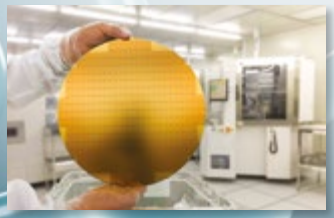
Isolast® PureFab® JPF23

HIGH-TEMPERATURE PERFLUOROELASTOMER FOR DURABILITY IN DRY GAS BASED PLASMA PROCESSES





Extends service life, minimizes contamination and enhances reliability in demanding fluorine- and oxygen-based semiconductor applications.

Isolast® PureFab® JPF23 is an advanced perfluoroelastomer (FFKM) specifically developed for high-temperature semiconductor applications involving aggressive plasma and reactive gases.

It is exceptionally compatible with fluorine-based chemistries, demonstrating minimal weight loss and outstanding mechanical recovery. This delivers long-term sealing performance in the most thermally and chemically demanding dry-process environments.

Isolast® PureFab® JPF23 is engineered to extend seal life in extreme conditions, minimize process contamination and maintain stable operations in both thermal and plasma-driven semiconductor toolsets.

ISOLAST® PUREFAB®

The Isolast® PureFab® range is a dedicated portfolio of FFKM materials engineered for the most demanding semiconductor environments. Each grade is carefully optimized for specific application requirements, considering process chemistry, system location and tool complexity — delivering exceptional high-purity sealing performance in plasma environments and under high-temperature conditions.

Features and Benefits

- Exceptional plasma resistance and thermal stability, providing reliable sealing at continuous temperatures up to +310 °C / +590 °F
- Engineered for superior compatibility with fluorine- and oxygen-based dry gas chemistries, improving yields and reducing maintenance requirements
- Preserves elasticity and sealing force through superior compression set performance, even after prolonged exposure to heat and plasma
- Maintains shape and function after thermal and mechanical cycling, ensuring process consistency
- Specifically formulated to enhance durability and minimize process contamination in extreme environments

Application Examples

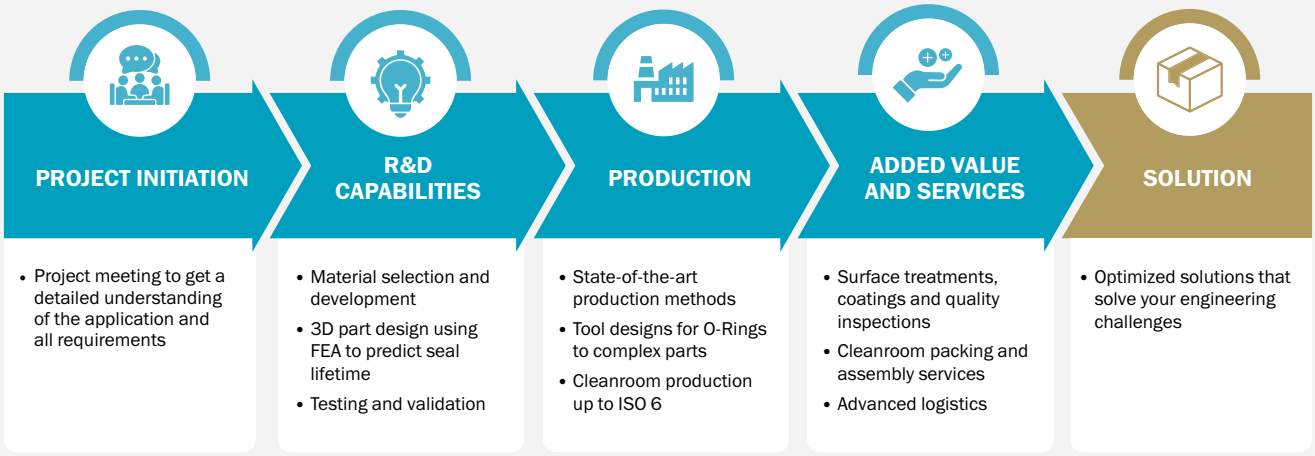
- Dynamic or static seals and components within plasma applications, such as dry etching and plasma-enhanced atomic layer deposition (PEALD)
- Critical components within atomic layer deposition (ALD), dry etching and stripping tools
- Chamber lid and gas inlet and outlet seals
- Bonded slit valve doors

ISOLAST® PUREFAB® JPF23

General Data	Isolast® PureFab® JPF23
Elastomer Type	FFKM
Color	White

Properties	Test Method	Results
Hardness (Shore A)	ASTM D2240	75
Tensile Strength (MPa)	ASTM D412	12.3
Elongation at Break (%)	ASTM D412	258
Modulus 100% (MPa)	ASTM D412	6.7
Compression Set (%)		
72h @ +200 °C / +392 °F	ASTM D395	16
72h @ +250 °C / +482 °F		23
72h @ +300 °C / +572 °F		37
72h @ +310 °C / +590 °F		40
Continuous Service Temperature		-5 °C to +310 °C / +14 °F to +590 °F

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The information in this publication is intended for general reference only and not for specific applications. Customers must satisfy themselves with the suitability of a product and material for their individual applications.

Color variations, including dark spots, are a normal result of the polymer curing process and do not indicate the presence of foreign matter or negatively impact performance, reliability or cleanliness.

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Version no. 9900276GBGG1125