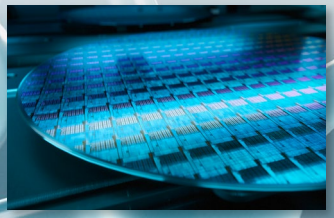
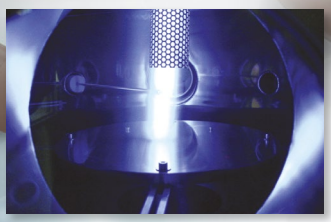
Isolast® PureFab® JPF50

FLUOROSURFACTANT-FREE UNFILLED PERFLUOROELASTOMER FOR ADVANCED SEMICONDUCTOR MANUFACTURING PROCESSES





Isolast® PureFab® JPF50 is a high-purity FFKM manufactured without fillers and fluorosurfactants to lower its environmental impact, extend service life and increase yields, meeting the requirements of the semiconductor industry.

Our next-generation perfluoroelastomer (FFKM), Isolast® PureFab® JPF50, is specially developed for advanced semiconductor processes that require maximum purity and plasma resistance. Manufactured without fluorosurfactants, it helps improve the environmental sustainability of operations and offers exceptional contamination-free performance.

The material has enhanced plasma resistance through a proprietary manufacturing process without requiring the addition of any organic or inorganic fillers within the elastomer formulation.

In addition to excellent sealing properties, Isolast® PureFab® JPF50 maintains maximum vacuum integrity at temperatures up to +300 °C/+572 °F with exceptionally low outgassing, meeting the stringent requirements of high-end semiconductor processes.

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

- Fluorosurfactant-free manufacturing for reduced environmental impact
- Best-in-class plasma resistance against a wide range of chemistries and the most common thin-film precursors to maximize seal lifetime
- Ultra-low outgassing and minimized particle generation reduces contamination risk and maximizes process yields
- Exceptional performance at high temperatures, ensuring reliable sealing in demanding process environments
- Low compression set and robust mechanical properties for longer maintenance cycles and reduced downtime

Application Examples

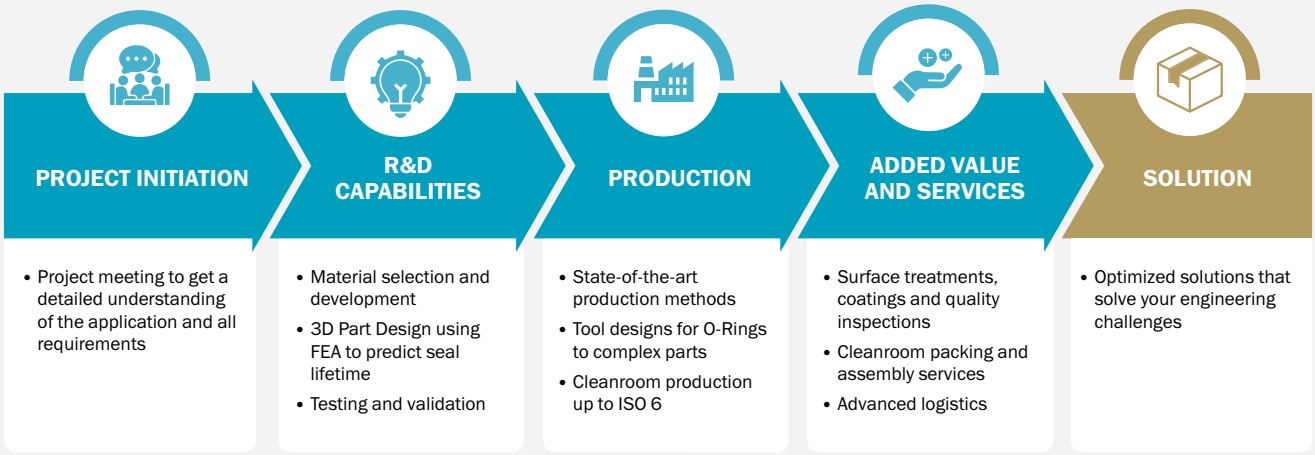
- Seals and components within deposition processes (PECVD, HDPCVD, PEALD) and etching processes (ALE, dry etching)
- Chamber lid and gas inlet seals
- Bonded slit valve door seals

ISOLAST® PUREFAB® JPF50

General Data	Isolast® PureFab® JPF50
Elastomer Type	FFKM
Color	Dark Brown

Properties	Test Method	Results
Hardness (Shore A)	ASTM D2240	75
Tensile Strength (MPa)	ASTM D1414	17.3
Elongation at Break (%)	ASTM D1414	193
Modulus 100% (MPa)	ASTM D1414	4.6
Compression Set (%)		
72h @ +200 °C/+392 °F	ASTM D395	8
72h @ +300 °C/+572 °F		24
Continuous Service Temperature		-5 °C to +300 °C/+14 °F to +572 °F

TOGETHER WE DEVELOP YOUR POLYMER SOLUTION



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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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