TRELLEBORG
SEALING SOLUTIONS

Isolast® Fab Range™ J9680

Superior sealing for aggressive plasma applications

Sealing Solutions for the Semiconductor Industry

Isolast® Fab Range™ J9680

Isolast® J9680 is a translucent, modern architecture perfluoroelastomer compound, formulated for select plasma and gas deposition processes, where the ultimate in low-particle generation and low outgassing are key performance criteria. Isolast® J9680 exhibits outstanding chemical resistance in oxygen and fluorine-based plasmas, has excellent long-term mechanical properties and is suited for static and low sealing force applications in moderate temperatures to +230 °C / +450 °F.

The Isolast® Fab Range™ offers high specification sealing compounds, exclusively formulated for the semiconductor industry. The special formulations help reduce downtime and improve production efficiency by extending seal life. These high-performance perfluoroelastomers are virtually inert and demonstrate almost universal chemical compatibility, giving real benefits and cost advantages in semiconductor applications.

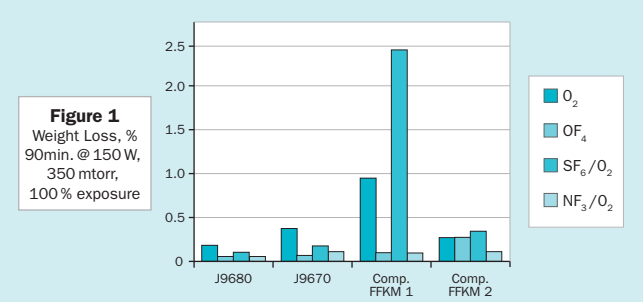
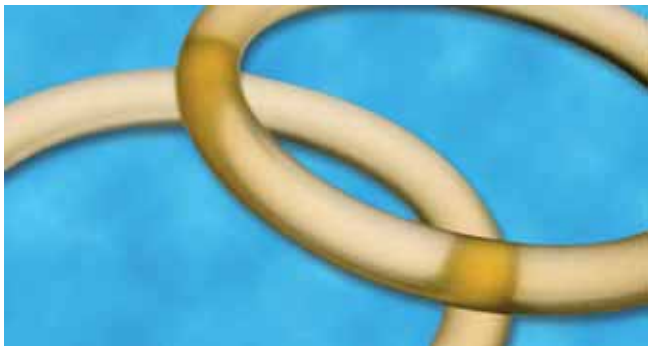


Figure 1
Weight Loss, %
90min. @ 150 W,
350 mtorr,
100 % exposure



Applications

Isolast® J9680 is recommended for use in select dry process applications in moderate operating temperatures up to +230 °C / +450 °F where minimal outgassing and particle generation are required in static and low sealing force applications to maximize wafer counts:

- Deposition
- Dry Plasma Etch
- Dry Ashing
- Oxidation
- Metallization
- Diffusion

Isolast® Fab Range™
J9680 Compound Data

Compound No.	**J9680**			
Elastomer Type	**FFKM Ultra Pure**			
Color	**Translucent**			
Hardness	ASTM D 2240 DIN 53505	**75 (+/-5) Shore A**		
Tensile Strength	ASTM D 412	2300 psi	DIN 53504	16.0 MPa N/mm^2
Elongation at break	ASTM D 412	215 %	DIN 53504	215 %
Modulus @ 100 %	ASTM D 412	800 psi	DIN 53504	5.5 MPa
Compression set	ASTM D 395 B 72 h / +392 °F 500 h / +392 °F	30 42	DIN ISO 815 Type B 72 h / +200 °C 500 h / +200 °C	30 42
Service temperature	ASTM D 1418	+14 °F to +450 °F	DIN ISO 1629	-10 °C to +230 °C

Features

- High-purity, very low metallic ion content
- Exceptional chemical resistance in all oxygen and fluorine-based plasma environments
- Ultra-low particle generation
- Continuous service temperature to +230 °C / +450 °F
- Very good long-term compression set
- Available in O-Rings and other standard seals, custom-molded and rubber-metal bonded designs
- Standard product finishing in Class 100 Cleanroom

Trelleborg Sealing Solutions offers to the semiconductor industry:

- Quality levels to ISO 9001:2000 including 100% inspection and zero defects
- Wash and pack to class 100 standards
- Leading-edge in-house polymer development test capability
- Sealing solutions using our extensive design facilities, including material specific non-linear Finite Element Analysis (FEA)
- Comprehensive technical support and after-sales service through the global Trelleborg Sealing Solutions network

The indicated material properties are average values determined with the use of standard test labs according to the corresponding specification. These values cannot be used as specification values and may be different from the material properties of finished parts. This is to emphasize that the end user is requested to test the material with regard to its suitability in the application. This information is not subject to an automatic update.

© 2007 Trelleborg AB. ® All trademarks are the property of Trelleborg AB.

TRELLEBORG
SEALING SOLUTIONS

99GBP9011XE1207-J9680