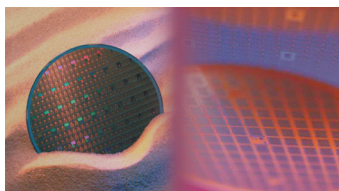


# ORD Problem Solved!

## Parofluor ULTRA™ Advanced Perfluorinated Elastomers

Parofluor ULTRA™ is an exclusive line of advanced perfluorinated elastomers (FFKM) developed and produced by Parker Hannifin's Seal Group. The perfluorinated elastomers provide outstanding performance beyond that of any other available elastomer family. Parker's Parofluor materials are formulated specifically for use in the most aggressive and demanding sealing applications, providing outstanding retained resiliency compared with other perfluorinated materials.

Parofluor ULTRA™ materials offer excellent compression



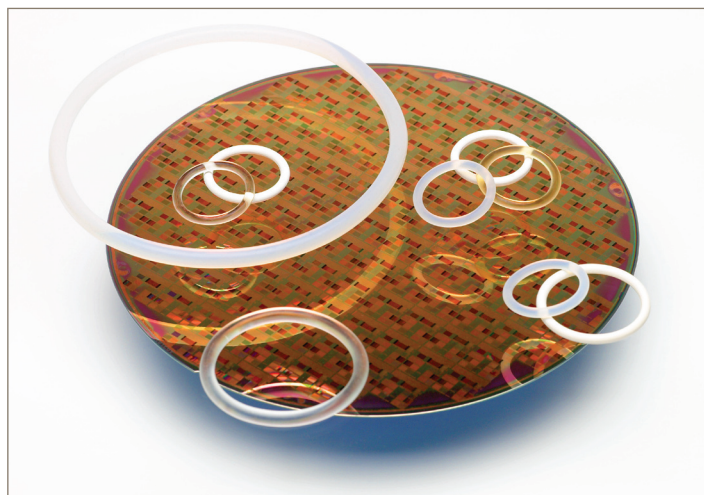
set resistance, superior thermal stability and compatibility with a wide range of harsh chemistries, making them the ideal solution for sealing applications that exceed the limits of other high performance elastomers.

With their outstanding physical properties, Parofluor ULTRA™ materials can be found in the most critical environments of semiconductor fabrication, aerospace, chemical processing, energy exploration and production, pharmaceutical, and other harsh fluid handling processes.

For more information on these or any other of Parker's 200+ compounds, please contact the O-Ring Division at 859-269-2351 or send an e-mail to our engineering department at [ordmail@parker.com](mailto:ordmail@parker.com).

### Parofluor ULTRA™

FF354-65	White	5°F to 600°F
FF102-75	Black	5°F to 525°F
FF200-75	Black	5°F to 608°F
FF350-75	White	5°F to 600°F
FF352-75	White	5°F to 600°F
FF500-75	Black	5°F to 525°F
FF202-90	Black	5°F to 608°F



## Application Success Story

### Application:

- 200 mm plasma asher tool
- Operating temperature at 200°C continuous with potential excursions up to 300°C
- Process used oxygen and fluorinated plasma
- Chamber face seal

### Problem:

A semiconductor process equipment manufacturer of a 200mm plasma asher tool had o-ring failures on a chamber face seal within an Asia FAB. The OEM specifications called out a white 75 durometer competitor material. After one month, the competitor's material showed severe compression set and required replacement.

### Parker Solution:

Parker recommended material FF352-75 because of its

performance and specifically its proven resistance in oxygen plasma applications. FF352-75 has successfully demonstrated resistance to aggressive oxygen plasma environments and has a continuous operating temperature up to 300°C. Parker's Parofluor ULTRA materials have excellent compression set resistance.

### Outcome:

Parker o-rings were supplied and tested at the OEM and at the Asia FAB site. Testing on Parker's material ran for 6 months and showed no signs of sealing problems. The competitor's material, however, needed to be replaced after only 1 month. Parker's FF352-75 material extended the customer's PM cycle 6X, providing a significant cost savings. The OEM is specifying Parker for the production tool.