



CHEMRAZ[®] 644

Minimal Contamination in Dry Plasma Etching Processes

SEALING SOLUTIONS

Specifically developed to meet the demands of aggressive dry plasma systems and the corresponding remote O₂ cleaning processes, Chemraz[®] 644, a perfluoroelastomer with a unique formulation, provides enhanced plasma resistance and minimal contamination resulting in less downtime and higher wafer processing yields. Recommended primarily for both static and dynamic oxide etch wafer processing applications, Chemraz 644 remains stable at service temperatures up to 315°C (600°F).



FEATURES & BENEFITS

- Excellent plasma resistance in a variety of aggressive chemical environments
- Minimal particulation
- Withstands high service temperatures up to 315°C (600°F)

APPLICATIONS

- Endpoint windows
- Bell jar seals
- Valve seals
- KF fitting seals
- Window seals
- Isolator valve seals
- Lid seals
- Gas Inlet seals
- Slit valve seals
- Chamber seals

RECOMMENDED PROCESS APPLICATIONS

- **Dry plasma etch**
- Remote O₂ plasma cleans
- Dry ashing

TYPICAL PROPERTIES*	
Physical	Typical Value
Color	Dark Green
Polymer Type	Perfluoroelastomer
Specific Gravity	2.03
Hardness, Shore A	75
Mechanical	
Tensile Strength, psi (kPa)	1794 (12370)
Elongation, %	207
Tensile Modulus, psi (kPa)	
Modulus @ 50% Elongation	326 (2250)
Modulus @ 100% Elongation	633 (4370)
Compression Set: 70 hours @ 204°C @ 25% Deflection, %	25
Thermal	
Temperature Range**	-20°C to 315°C (-4°F to 600°F)

* Note: Unless otherwise indicated, all tests are performed on AS 568A (-214) O-rings.

** Consult GT Sales/Engineering for applications that require continuous service temperatures above 80% of the maximum temperature.

Statements and recommendations in this publication are based on our experience and knowledge of typical applications of this product and shall not constitute a guarantee of performance nor modify or alter our standard warranty applicable to such products.

Prior to actual use it is recommended compatibility tests be run to determine suitability in a specific application. This is critical where failure could result in injury or damage. A regular program of inspection and replacement should be implemented. Greene, Tweed technical personnel are available to help with a recommendation.

Contact Us

Greene, Tweed Tel: +1.215.256.9521
 Semiconductor Fax: +1.215.256.0189
 Kulpsville, PA, USA

www.gtsemi.com