CHEMRAZ® XPE-HP

Provides Superior O_2, Ozone, and UV Resistance for Increased MTBC

ADVANCED COMPOUND RESISTS DECOMPOSITION

As etch and deposition wafer processing operations utilize more diverse chemistries to maintain control of critical features typical of 3D architectures and devices, the sealing environment demands increase as well. These harsh environments often break down materials, causing harmful particulation and reduced wafer process equipment productivity.

Greene Tweed's Chemraz® XPE-HP leverages an advanced perfluoro-elastomer formulation which is highly resistant to O_2 plasma, ozone, and UV environments, and stands up to fluorine-based plasmas like CF_4 and NF_3.

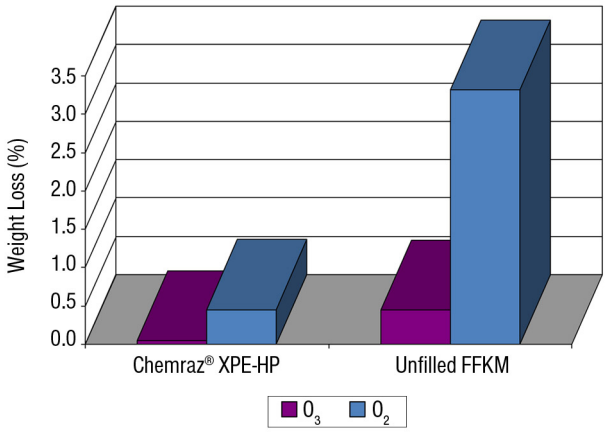
Chemraz XPE-HP offers the semiconductor industry an alternative to products that quickly erode and particulate in advanced wafer processing operations. With superior resistance to both radical oxygen and fluorine environments, this material affords increased chip yield and MTBC (Mean Time Between Cleans).

FEATURES & BENEFITS

- High UV and ozone resistance enables next generation process technology insertions
- Superior O_2 plasma resistance results in improved product integrity
- High temperature capability
- Reduced erosion and particulation
- Decreased maintenance and replacement requirements
- Excellent compression set

Chemraz XPE-HP seals

WEIGHT LOSS COMPARISON



APPLICATIONS

- Chamber and slit valve seals
- Endpoint windows
- Gas inlet/outlet seals
- Gate and isolator valve seals
- Reactant delivery system seals
- Reaction chamber lid seals

TYPICAL PROPERTIES*		
Physical	**ASTM Method**	**Typical Value**
Color		Gray
Polymer Type		Perfluoroelastomer
Specific Gravity	D792	2.18
Hardness, Shore A**	D2240	80
Hardness, Shore M	D2240	86
Mechanical		
Tensile Strength, psi (MPa)	D1414	2,000 (13.8)
Elongation, %	D1414	180
Tensile Modulus @ 100% Elongation, psi (MPa)	D1414	760 (5.2)
Compression Set @ 20% Deflection, % – 70 hours @ 200°C (392°F) – 70 hours @ 240°C (464°F)	D395	 24 34
Thermal		
Maximum Service Temperature		300°C (572°F)

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

Collaborative innovation from GREENE, TWEED & CO., INC., and DAIKIN INDUSTRIES, LTD.

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

Our Distributor
Banner Industries
High Purity Flow
Component Distribution
USA & Asia Pacific
Tel: +1.800.705.0016
Web: www.bannerindustries.com
BannerIndustries