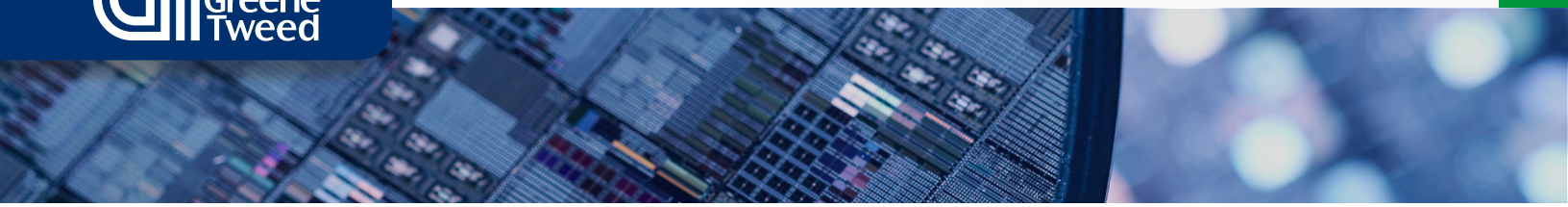

Chemraz® XPE-HP

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

Advanced Compound Resists Decomposition

As etch and deposition wafer processing operations use 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 perfluoroelastomer formulation that is highly resistant to O_2 plasma, ozone, and UV environments, and stands up to fluorine-based plasmas such as 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 and 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

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

Contact Us
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Fax: +1.215.256.0189

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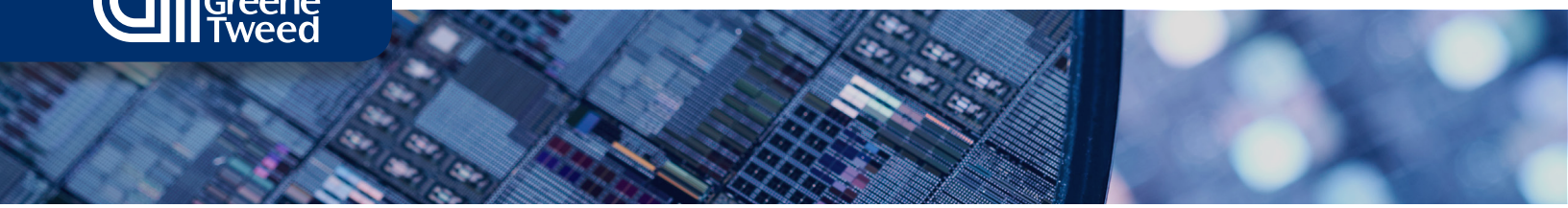


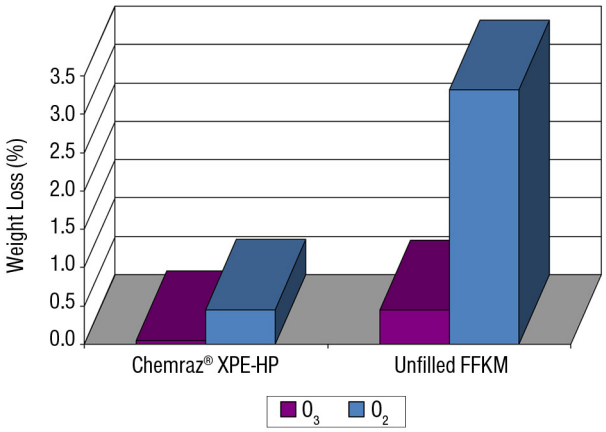
Typical Properties	
Physical Properties (ASTM Standard)	**Typical**
Color	Gray
Polymer Type	Perfluoroelastomer
Specific Gravity (D792)	2.18
Hardness, Shore A* (D2240)	80
Hardness, Shore M (D2240)	86
Mechanical (ASTM Standard)	
Tensile Strength, psi (MPa) (D1414)	2000 (13.8)
Elongation, % (D1414)	180
Tensile Modulus @ 100% Elongation, psi (MPa) (D1414)	760 (5.2)
Compression Set @ 20% Deflection, % (D395) 70 hours @ 392°F (200°C) 70 hours @ 464°F (240°C)	 24 34
Thermal	
Maximum Service Temperature	572°F (300°C)

Not to be used for specification purposes.

Unless otherwise indicated, all tests are performed on AS 568A (-214) o-rings.

** Test performed on button samples.*

Weight Loss Comparison



Note: Color variations and dark spots that might be observed in Chemraz® parts are considered cosmetic and an inherent result of the polymer curing process. They are not foreign matter and not anticipated to adversely affect the performance of the part in service. Please contact a Greene Tweed applications engineer for additional information.

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