Chemraz XPE

Perfluoroelastomer

Greene, Tweed & Co.

Message:

Protection against oxygen-infused plasma is key in many etch chamber environments. These harsh environments often breakdown non-resistant materials, causing harmful particulation and, ultimately, defective chips.

Greene, Tweed's Chemraz® XPE is highly resistant to O2 plasma and can be used in a wide range of applications, such as slit valve doors, reaction chamber lid seals, and gate valve seals. This advanced elastomeric material offers the semiconductor and solar industry an alternative to legacy products that quickly erode in the oxygen environment. With excellent resistance to both 02 and CF4 plasmas, this material affords an increased chip yield and maximized production. In addition, XPE seals provide customers with an increased MTBR (mean time between repair) to reduce downtime and maintenance costs.

| General Information | | | |
|------------------------------|--------------------|-------|-------------|
| Uses | Seals | | |
| | Valves/Valve Parts | | |
| Appearance | Grey | | |
| Forms | Pellets | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 2.12 | g/cm³ | ASTM D792 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (M-Scale) | 76 | | ASTM D1414 |
| Durometer Hardness (Shore A) | 73 | | ASTM D2240 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress (100% Strain) | 3.63 | МРа | ASTM D1414 |
| Tensile Strength (Break) | 13.3 | МРа | ASTM D1414 |
| Tensile Elongation (Break) | 220 | % | ASTM D1414 |
| Compression Set ¹ | | | |
| 204°C, 70 hr | 15 | % | |
| 240°C, 70 hr | 22 | % | |
| Thermal | Nominal Value | Unit | |
| Service Temperature | 280 | °C | |
| NOTE | | | |
| 1. | 25% Deflection | | |

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

