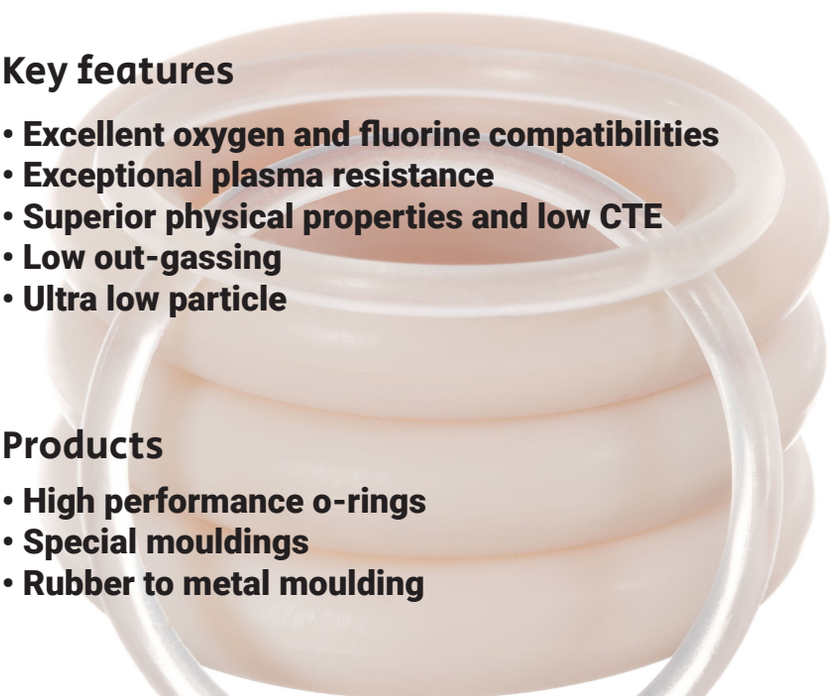
PERFREZ® XL12 (CZ78CK44) Product Data Sheet
Semiconductor applications

Our range of PERFREZ® high performance materials for semiconductor processes meets the most challenging and demanding applications for aggressive chemicals, gas and high temperatures. These materials offer excellent chemical and thermal resistance, thermal stability and high purity under these extreme process conditions.

We provide our customers with the highest quality products and technical support on seal design, material recommendation, installation techniques and test analysis, specifically for the semiconductor market.

CZ78CK44 FFKM features superior physical properties with exceptionally low particle generation. It offers a low Coefficient of Thermal Expansion (CTE) that mitigates risk of extrusion, while offering outstanding plasma resistance and erosion, especially with aggressive fluorine based process.

Basic Polymer: Perfluoroelastomer
Hardness: 78 +/- 5 Shore A
Temperature range: -20˚C to +260˚C
Colour: Beige



Key features

- **Excellent oxygen and fluorine compatibilities**
- **Exceptional plasma resistance**
- **Superior physical properties and low CTE**
- **Low out-gassing**
- **Ultra low particle**

Products

- **High performance o-rings**
- **Special mouldings**
- **Rubber to metal moulding**

Property	Results
Hardness (Shore A)	78 (+/- 5)
Elongation at break, %	200
Tensile Strength, psi (MPa)	2474 (17.06)
Modulus @ 100%, psi (MPa)	985 (6.79)
Coefficient of Thermal Expansion	$2.61x10^{-4}$
Min. Operating Temperature, °C (°F)	-20 (-4)
Max. Operating Temperature, °C (°F)	260 (500)

Applications

- **Chamber Lid Seals**
- **Door Seals**
- **End Point Windows**
- **Gas Inlet Seals**
- **Isolator Valve Seals**
- **KF-Fittings**
- **Slit Valves**
- **Window Seals**

March 2024