DuPont™ Kalrez® 8900

For Semiconductor Oxidation, Diffusion, ALD, and LPCVD Applications

Technical Information - March, 2017

Product Description

DuPont™ Kalrez® 8900 perfluoroelastomer parts are a black product for oxidation, diffusion, ALD, and LPCVD applications. It offers outstanding thermal stability, very low outgassing and excellent (low) compression set properties. Kalrez® 8900 parts exhibit excellent retention of physical properties at elevated temperatures, have excellent mechanical strength and are well-suited for both static and dynamic sealing applications. A maximum application temperature of 325°C (617°F) is suggested. Short excursions to higher temperatures may also be possible. Ultrapure post-cleaning and packaging is standard for all Kalrez® 8900 parts.

Features/Benefits

- Outstanding thermal stability
- Excellent (low) compression set properties
- Very low outgassing properties
- Very low moisture content
- Excellent retention of physical properties at elevated temperatures
- Excellent resistance to fluorine gas

Suggested Applications

- Quartz Tube Seals
- Plenum Seals
- Chamber Seals
- Fittings
- Center Ring Seals

Typical Physical Properties[1]	
Color	Black
Hardness[2], Shore A (plied disk)	76
Hardness[3], Shore M (O-ring)	80
100% Modulus[4], MPa (psi)	13.33 (1933)
Tensile Strength at Break[4], MPa (psi)	20.04 (2907)
Elongation at Break[4], %	135
Compression Set[5], %	
70 hr. at 204 °C (400°F)	8
70 hr. at 300 °C (572°F)	32
70 hr. at 325 °C (617°F)	59
Max. Application Temperature[6], °C (°F)	325 (617°F)

[1] Not to be used for specification purposes
[2] ASTM D2240 (plied-disk test specimens)
[3] ASTM D2240 and D1414 (AS568 K214 O-ring test specimens)
[4] ASTM D412 and D1414 (AS568 K214 O-ring test specimens)
[5] ASTM D395B and D1414 (AS568 K214 O-ring test specimens)
[6] DuPont proprietary test method

*Kalrez® 7075UP should be used for chlorine-based/Metal CVD applications

The miracles of science™