

DuPont™ Kalrez® 8900

Technical Information — September 2010

Product Description

DuPont™ Kalrez® 8900 perfluoroelastomer parts are a black product that has been specifically developed for semiconductor thermal processes, e.g., oxidation, diffusion furnace, metal CVD, ALD, and LPCVD. It offers outstanding thermal stability, very low outgassing and excellent (low) compression set properties. Kalrez® 8900 perfluoroelastomer 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 continuous service 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.

Typical Physical Properties¹

Color	Black
Maximum Application Temperature ² , °C (°F)	325 (617)
Maximum Application Pressure ² , MPa (psi)	12.41 (1800)
Durometer, Shore A ³	73
Durometer, Shore M (o-ring)	80
100% Modulus ⁴ , MPa (psi)	11.72 (1700)
Elongation at break ⁴ , %	143
Tensile at break ⁴ , MPa (psi)	16.20 (2350)
Compression set ⁵ , % (70 hours at 204°C (400°F))	
Pellet	
Size 214 O-Ring	14

Specific Gravity, g/cc

¹Not to be used for specification

²DuPont proprietary test method – maximum application temperature and pressure may vary with seal design and application specifics

³ASTM D2240 (pellet test specimen)

⁴ASTM D412, 500mm/min

⁵ASTM D395B



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Additional Physical Properties¹

Tg ² , °C (°F)	
TR-10 ³ , °C (°F)	-0.65 (31)
Brittle Point ⁴ , °C (°F)	
Linear Coefficient of Thermal Expansion, /°C (/°F)	2.83x10 ⁻⁴ (1.57x10 ⁻⁴)
Abrasion Resistance ⁵ , (volume loss, cubic mm)	
Coefficient of friction ⁶ (to steel)	
Static	
Dynamic	
Volume resistivity ⁷ , ohms/square	
Surface resistivity ⁷ , Ohm-cm	
Dielectric Constant ⁸ at 150°C and 1 MHz	
Dissipation Factor ⁸ at 150°C and 1MHz	

¹Not to be used for specification

²DuPont proprietary test method – maximum application temperature and pressure may vary with seal design and application specifics

³ASTM D1329

⁴ASTM D746

⁵Din 53 516

⁶ASTM 1894

⁷ASTM D 257

⁸ASTM D150

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