

DuPont™ Kalrez® 9100

Technical Information — September 2010

Product Description

DuPont™ Kalrez® 9100 perfluoroelastomer parts are an amber translucent product targeted specifically for etching and deposition process applications, e.g., HDPCVD, PECVD, ALD, etc. It has also exhibited excellent performance in “select” ashing/stripping processes. Kalrez® 9100 has been specifically designed for low erosion and ultra-low particle generation in harsh plasma environments. It offers excellent thermal stability, very low outgassing as well as excellent elastomer recovery and mechanical strength properties and is well suited for both static and dynamic sealing applications. A maximum continuous service temperature of 300°C (572°F) is suggested. Ultrapure post-cleaning and packaging is standard for all Kalrez® 9100 parts

Typical Physical Properties¹

Color	Amber
Maximum Application Temperature ² , °C (°F)	300 (572)
Maximum Application Pressure ² , MPa (psi)	5.17 (750)
Durometer, Shore A ³	68
Durometer, Shore M (o-ring)	74
100% Modulus ⁴ , MPa (psi)	4.27 (620)
Elongation at break ⁴ , %	220
Tensile at break ⁴ , MPa (psi)	11.85 (1720)
Compression set ⁵ , % (70 hours at 204°C (400°F))	
Pellet	
Size 214 O-Ring	17

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)	-3.15 (26)
Brittle Point ⁴ , °C (°F)	
Linear Coefficient of Thermal Expansion, /°C (/°F)	4.64x10 ⁻⁴ (2.58x10 ⁻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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