

DuPont™ Kalrez® 8002

Technical Information — September 2010

Product Description

DuPont™ Kalrez® 8002 perfluoroelastomer parts are a clear, transparent product for ashing/stripping and “select” etching and deposition process applications, e.g., SACVD, etc. This unfilled product offers ultra-low particle generation in oxygen and fluorine-based plasmas versus mineral-filled products. Kalrez® 8002 exhibits excellent resistance to “dry” process chemistry, has good mechanical strength and is well suited for static, low stress/low sealing force and “select” bonded door seal applications. A maximum continuous service temperature of 275°C (527°F) is suggested. Ultrapure post-cleaning and packaging is standard for all Kalrez® 8002 parts.

Typical Physical Properties¹

Color	Clear
Maximum Application Temperature ² , °C (°F)	275 (527)
Maximum Application Pressure ² , MPa (psi)	3.45 (500)
Durometer, Shore A ³	69
Durometer, Shore M (o-ring)	76
100% Modulus ⁴ , MPa (psi)	2.88 (420)
Elongation at break ⁴ , %	246
Tensile at break ⁴ , MPa (psi)	15.95 (2315)
Compression set ⁵ , % (70 hours at 204°C (400°F))	
Pellet	
Size 214 O-Ring	15

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)	1 (33)
Brittle Point ⁴ , °C (°F)	
Linear Coefficient of Thermal Expansion, /°C (/°F)	3.95x10 ⁻⁴ (2.20x10 ⁻⁴)
Abrasion Resistance ⁵ , (volume loss, cubic mm)	131.3
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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