

DuPont™ Kalrez® 7075

Technical Information — September 2010

Product Description

DuPont™ Kalrez® 7075 perfluoroelastomer parts are a carbon black filled product that has enhanced physical performance properties including very low compression set and improved seal force retention. This product utilizes a proprietary cure technology with mechanical properties designed for improved sealing performance in both high temperature environments and temperature cycling situations. Kalrez® 7075, for the chemical processing industry, provides even greater sealing performance in dynamic applications where low friction is required. Kalrez® 7075 was specifically developed to be used as an o-ring or customer-sealing component in the chemical and hydrocarbon processing industries, with an improved thermal resistance that extends maximum service temperature to 327°C (620°F). Kalrez® Spectrum™ 7075 offers the enhanced elastomeric properties outlined above while providing chemical resistance better than the industry standard, set by Kalrez® 4079.

Typical Physical Properties¹

Color	Black
Maximum Application Temperature ² , °C (°F)	327 (620)
Maximum Application Pressure ² , MPa (psi)	8.27 (1200)
Durometer, Shore A ³	75
Durometer, Shore M (o-ring)	83
100% Modulus ⁴ , MPa (psi)	7.58 (1100)
Elongation at break ⁴ , %	160
Tensile at break ⁴ , MPa (psi)	17.91 (2600)
Compression set ⁵ , % (70 hours at 204°C (400°F))	
Pellet	12
Size 214 O-Ring	15
Specific Gravity, g/cc	1.99

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)	-1.6 (29)
TR-10 ³ , °C (°F)	-4 (24)
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)	126
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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