

DuPont™ Kalrez® 6375

Technical Information — September 2010

Product Description

DuPont™ Kalrez® 6375 perfluoroelastomer parts, designed specifically for the chemical process industry, combine new polymer technology with innovative patented curing technology. Kalrez® 6375 is designed to give outstanding performance in the widest possible range of chemical and temperatures. This product is an excellent choice for use in acids, bases, amines, steam, ethylene oxide, and many other aggressive chemicals. The curing system also allows for a continuous upper service temperature of 275°C (527°F). This high temperature stability translates to increased chemical resistance over all temperature ranges, especially if high temperature process excursions occur. This combination of chemical and thermal resistance provides advantages for chemical processors. Today, chemical processors may use several perfluoroelastomer parts, including Kalrez® 4079, 1050LF and 2035 to optimize chemical and thermal performance. Kalrez® Spectrum™ 6375 may be used in many applications to displace these products. However, if optimum chemical resistance is required, then applications must be individually reviewed for the optimum product selection.

Typical Physical Properties¹

| | |
|--|--------------|
| Color | Black |
| Maximum Application Temperature ² , °C (°F) | 275 (527) |
| 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) | 7.24 (1050) |
| Elongation at break ⁴ , % | 160 |
| Tensile at break ⁴ , MPa (psi) | 15.16 (2200) |
| Compression set ⁵ , % (70 hours at 204°C (400°F)) | |
| Pellet | 25 |
| Size 214 O-Ring | 30 |
| 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) | -3.8 (25) |
| TR-10 ³ , °C (°F) | -3 (26) |
| Brittle Point ⁴ , °C (°F) | |
| Linear Coefficient of Thermal Expansion, /°C (/°F) | 2.89x10 ⁻⁴ (1.60x10 ⁻⁴) |
| Abrasion Resistance ⁵ , (volume loss, cubic mm) | 127.9 |
| Coefficient of friction ⁶ (to steel) | |
| Static | 0.928 |
| Dynamic | 0.474 |
| Volume resistivity ⁷ , ohms/square | 4.23 x 10E+16 |
| Surface resistivity ⁷ , Ohm-cm | 2.06 x E+16 |
| 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

Visit us at kalrez.dupont.com or vespel.dupont.com

Contact DuPont at the following regional locations:

North America
800-222-8377

Latin America
+0800 17 17 15

Europe, Middle East, Africa
+41 22 717 51 11

Greater China
+86-400-8851-888

ASEAN
+65-6586-3688

Japan
+81-3-5521-8484

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