

# DuPont™ Kalrez® 6221

Technical Information — September 2010

## Product Description

DuPont™ Kalrez® 6221 perfluoroelastomer parts are compliant with the United States' Food and Drug Administration's regulations for repeated use in contact with food as described by 21 CFR177.2600 and Food Contact Notification 000101. Kalrez® parts made from compound 6221 have been tested in accordance with the United States Pharmacopoeia Class VI (USP Class VI) testing protocol and meet the test requirements of a USP Class VI polymer. This is a white product that offers excellent steam cycling resistance and reduces extractables from sealing materials to trace levels.

### Typical Physical Properties<sup>1</sup>

Color	White
Maximum Application Temperature <sup>2</sup> , °C (°F)	260 (500)
Maximum Application Pressure <sup>2</sup> , MPa (psi)	8.27 (1200)
Durometer, Shore A <sup>3</sup>	70
Durometer, Shore M (o-ring)	
100% Modulus <sup>4</sup> , MPa (psi)	7.24 (1050)
Elongation at break <sup>4</sup> , %	150
Tensile at break <sup>4</sup> , MPa (psi)	15.16 (2200)
Compression set <sup>5</sup> , % (70 hours at 204°C (400°F))	
Pellet	27
Size 214 O-Ring	31
Specific Gravity, g/cc	2.18

<sup>1</sup>Not to be used for specification

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

<sup>3</sup>ASTM D2240 (pellet test specimen)

<sup>4</sup>ASTM D412, 500mm/min

<sup>5</sup>ASTM D395B



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## Additional Physical Properties<sup>1</sup>

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Tg <sup>2</sup> , °C (°F)	
TR-10 <sup>3</sup> , °C (°F)	-4 (24)
Brittle Point <sup>4</sup> , °C (°F)	
Linear Coefficient of Thermal Expansion, /°C (/°F)	3.07x10 <sup>-4</sup> (1.70x10 <sup>-4</sup> )
Abrasion Resistance <sup>5</sup> , (volume loss, cubic mm)	105.6
Coefficient of friction <sup>6</sup> (to steel)	
Static	0.698
Dynamic	0.452
Volume resistivity <sup>7</sup> , ohms/square	
Surface resistivity <sup>7</sup> , Ohm-cm	
Dielectric Constant <sup>8</sup> at 150°C and 1 MHz	
Dissipation Factor <sup>8</sup> at 150°C and 1MHz	

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

<sup>3</sup>ASTM D1329

<sup>4</sup>ASTM D746

<sup>5</sup>Din 53 516

<sup>6</sup>ASTM 1894

<sup>7</sup>ASTM D 257

<sup>8</sup>ASTM D150

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**Caution:** Do not use in medical applications involving permanent implantation in the human body. For other medical applications, discuss with your DuPont customer service representative and read Medical Caution Statement H-50103-3.

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