

# DuPont™ Kalrez® Spectrum™ 7275

For Aggressive Chemical Environments

Preliminary Product Datasheet - October 2016

## Product Description

DuPont™ Kalrez® Spectrum™ 7275 parts are a light brown product based on a proprietary crosslinking system targeted specifically for the chemical processing industry. It exhibits minimal swelling and improved retention of physical properties when exposed to aggressive chemicals, e.g., concentrated nitric acid, organosilanes, chlorosilanes, pure ethylene oxide, butyraldehyde, amines and vinyl and acrylic monomers. It also has excellent compression set resistance and good retention of physical properties after aging at high temperatures. A maximum application temperature of 300°C is suggested.

**TABLE 1: Typical Physical Properties<sup>1</sup>**

Color	Light Brown
Hardness, Shore A (Slab) <sup>2</sup>	75
Hardness, Shore M (O-ring) <sup>3</sup>	81
100% Modulus <sup>4</sup> , MPa (psi)	9.7 (1407)
Tensile Strength at Break <sup>4</sup> , MPa (psi)	14.5 (2103)
Elongation at Break <sup>4</sup> , %	160
Compression Set <sup>5</sup> , %, 70 hrs. at 204°C (400°F)	22
Maximum Application Temperature <sup>6</sup> , °C (°F)	300 (572)

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

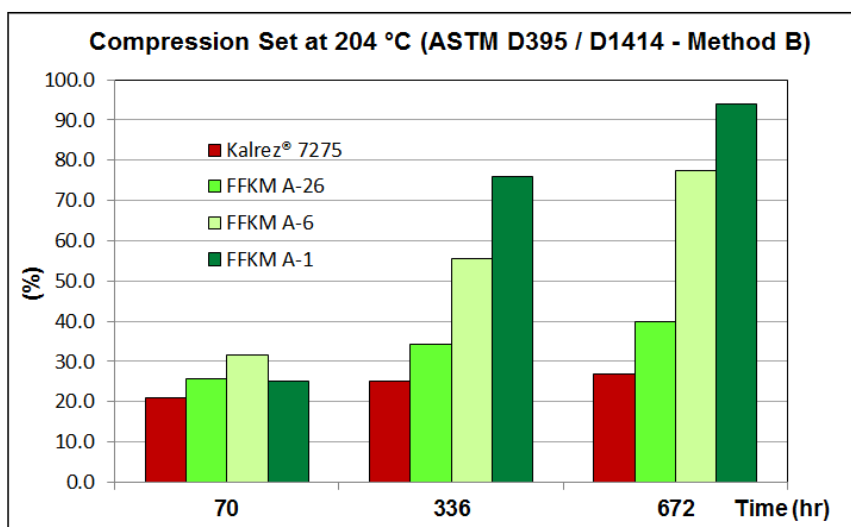
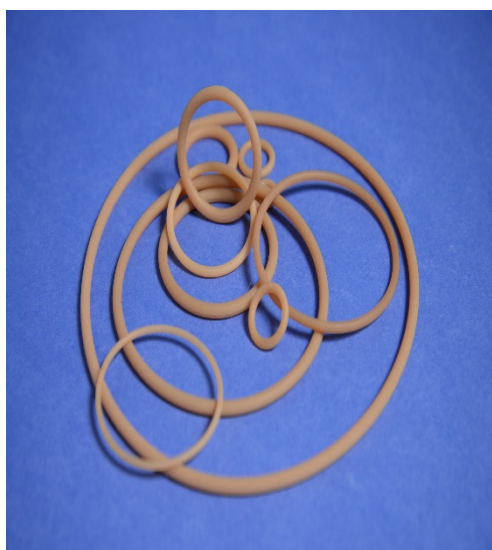
<sup>2</sup> ASTM D2240 (plied slab test specimens)

<sup>3</sup> ASTM D2240 & D1414 (AS568 K214 O-ring test specimens)

<sup>4</sup> ASTM D412 (dumbbell test specimens)

<sup>5</sup> ASTM D395B & D1414 (AS568 K214 O-ring test specimens)

<sup>6</sup> DuPont proprietary test method



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**TABLE 2: Weight % Change<sup>7</sup> Comparison Between Different FFKMs After Chemical Immersion. Low levels of weight gain/volume swell typically have good correlation with elastomer compatibility and seal functionality.**

Chemical	Temperature	Immersion Time (hrs.)	Kalrez® Spectrum™ 7275	FFKM 1	FFKM 2
	°C (°F)				
Ethylene Oxide (100 %)	31 (88)	1344	0.6	1.5	1.0
Ethylene Oxide (100 %)	50 (122)	672	2.2	3.2	5.6
Ethylene Oxide (100 %)	93 (200)	672	1.8	8.7	18.3
Acrylic Acid (100 %)	100 (212)	672	1.4	2.5	N/A
Styrene (100 %)	67 (153)	1600	1.4	>20 %	>20%
Acetic Acid (100 %)	100 (212)	672	1.9	2.7	5.2
Ethylenediamine (98 %)	90 (194)	672	3.1	3.5	9.6
Nitric Acid (70 %)	85 (185)	672	1.5	4.7	10.6
Butyraldehyde (100 %)	70 (158)	672	1.7	2.5	2.9
Sulfuric Acid (98 %)	150 (302)	672	1.4	8.9	7.7
Toluene (100 %)	100 (212)	672	2.4	2.7	N/A
Syltherm™ 800	270 (518)	168	0.6	N/A	N/A
Chlorosilanes (Mixture)	70 (158)	768	2.3	8.9	7.5

<sup>7</sup> ASTM D471 (AS568 K214 O-ring test specimens)

N/A = Test Data Not Available

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