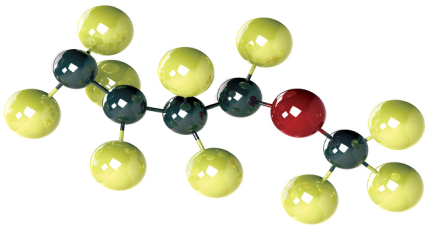
Technical Information

Kalrez® perfluoroelastomer parts

A Product of DuPont Dow Elastomers



General Description

Kalrez® K1 is a carbon black filled compound with a high hardness and a high modulus. This compound offers the best resistance to hot water, steam and amines. Compound K1 has a maximum service temperature of 280° C. The high hardness and modulus give it excellent resistance to extrusion under high pressure. This combination of chemical resistance and mechanical properties make compound 3018 ideal for use in the oil field and process industries.

Compound K1 is not recommended for use in stronger acid media at higher temperatures (organic or inorganic), and is not recommended for applications involving rapid thermal cycling.

The physical properties of compound K1 are as follows:

Physical Properties [1]

Hardness [2]	Shore A ± 5	91
100 % Modulus [3]	MPa	16,9
	psi	2450
TS at break	MPa	21,7
	psi	3150
Elongation at break	%	125
Compression set [4], 70 h at 204° C	%	35

[1] Not to be used for specifications
[2] ASTM D2240
[3] ASTM D412, 500 mm/min (20 in/min)
[4] ASTM D395 B, pellets

Chemical Resistance

Material Compound	Kalrez 3018
Chemical resistance to:	
Aromatic / Aliphatic Oils	+++
Acids	++
Alkalis	+++
Alcohols	+++
Aldehydes	+++
Amines	+++
Ethers	+++
Esters	+++
Ketones	+++
Steam / Hot Water	+++
Strong Oxidizers	0
Ethylene / Propylene Oxide	0

+++ = excellent
++ = very good
+ = good
0 = marginal
– = poor
–– = not recommended
* = recommended compound for this chemical