

V74C

Ultra-low compression set fluoroelastomer with excellent heat ageing properties



Description

V74C is a fluoroelastomer (FKM) material developed to offer extremely low compression set combined with excellent heat ageing properties.

V74C has been engineered to retain its mechanical properties significantly longer than conventional FKM grades even under extreme temperature cycling, thereby providing increased service life and significantly lower the cost of ownership.

V74C exhibits good resistance to acids and aqueous media, and excellent resistance to oil, fuels and hydraulic fluids at high temperature.

Available in any sized O-ring (fully moulded up to 2m/6.5ft internal diameter) and custom designed components.

Key Attributes

- ▶ Extremely low compression set and cumulative compression set providing extended seal life
- ▶ Excellent long-term high temperature stability
- ▶ Superior heat ageing properties for long-term sealing

Typical Applications

- ▶ Vacuum pumps & compressors (high temperature applications)
- ▶ Mechanical seals
- ▶ Chemical pumps and valves
- ▶ Couplings and quick connectors

Other materials available

V61C & V71C: ultra-low temperature FKM grades

FDA, USP & 3A compliant materials for food and pharmaceutical applications

ENDURA® oilfield elastomers for the ultimate performance in high pressure applications

Perlast® perfluoroelastomers when resistance to aggressive chemicals and high temperatures are required

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Typical Material Properties

| Property | ASTM | ISO | Value |
|-------------------------------|-------|--------|-----------------|
| Material Type | FKM | FPM | Copolymer |
| Colour | | | Black |
| Hardness: (°IRHD) | D1415 | ISO48 | 75 |
| Tensile Strength (MPa) | D412 | ISO37 | 12.5 |
| Elongation at break (%) | D412 | ISO37 | 220 |
| Compression Set: | | | |
| 24 hrs @ 200°C (392°F) | D395 | ISO815 | 5.0% |
| 72 hrs @ 200°C (392°F) | D395 | ISO815 | 9.5% |
| Minimum Operating Temperature | | | -18°C (-1°F) |
| Maximum Operating Temperature | | | +225°C (+437°F) |
| Heat Ageing: | | | |
| 72 hrs @ 250°C (482°F) | D573 | ISO188 | |
| Hardness change (points) | D1415 | ISO48 | -2 IRHD |
| Tensile strength change | D412 | ISO37 | 0 |
| Elongation at break change | D412 | ISO37 | 0 |

SPECIAL NOTE: This information is to the best of our knowledge accurate and reliable. However, Precision Polymer Engineering Ltd makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It is the customer's responsibility to evaluate parts prior to use, especially in applications where their failure may result in injury and/or damage. It should also be noted that all elastomeric parts have a finite life. Therefore a regular programme of inspection and replacement is strongly recommended. The material properties above should not be used for specification purposes.

CUMULATIVE COMPRESSION SET Vs Time @ 160°C (320°F)

