

V76F

Chemically resistant 'new generation' lead-free fluoroelastomer



Description

V76F is a peroxide-cured tetrapolymer (70% fluorine) formulated for high performance sealing applications in today's aggressive industrial environments.

V76F has been developed to provide outstanding resistance to solvents, fuels, hot water and steam (above 150°C/302°F).

V76F also offers superior resistance to acids, oils, coolants and hydraulic fluids, making it ideal for use in fuel systems, chemical processing equipment and certain critical diesel engine locations.

Alternative to lead-containing (litharge-cured) steam resistant grades.

Key Attributes

- ▶ Excellent resistance to fuels and solvents
- ▶ Excellent resistance to oils, steam/water and hydraulic fluids
- ▶ High temperature performance
- ▶ Superior long-term sealing performance

Typical Applications

- ▶ Marine diesel engines (e.g. fuel systems, cooling ports)
- ▶ Biofuel processing equipment
- ▶ Heat exchangers
- ▶ Paper/pulp processing equipment
- ▶ Hot water/steam systems

Other steam resistant elastomers

V75J (FKM) peroxide-cured, lead-free terpolymer

V88F (FKM) anti-friction tetrapolymer

A75H (FEPM) Aflas® material

E70K (EPDM) peroxide-cured material

Perlast® G80A (FFKM) perfluoroelastomer

Comparative data

Test conditions: 40°C; B50 Low emission automotive diesel fuel incorporating up to 50% FAME (fatty acid methyl ester)

Critical Material Properties	HNBR	FFKM	V76F
Hardness change after 266 days	-17	-1	-4
Volume change after 266 days	+14.31%	<1%	<1%



Typical Material Properties

Property	ASTM	ISO	Value
Material Type	FKM	FPM	Tetrapolymer
Colour			Black
Hardness: (°IRHD)	D1415	ISO48	71
Tensile Strength (MPa)	D412	ISO37	27.4
Elongation at break (%)	D412	ISO37	210
Compression Set: 72 hrs @ 200°C (392°F)	D395	ISO815	12.1%
Minimum Operating Temperature			-15°C (+5°F)
Maximum Operating Temperature			+250°C (+482°F)
Heat Resistance: 72 hrs @ 200°C (392°F)			
Hardness change (points)	D1415	ISO188	3 IRHD
Tensile strength change	D412	ISO48	+3%
Elongation at break change	D412	ISO37	-15%

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.

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