

V80D

Low compression set fluoroelastomer for long-term high temperature applications



Description

V80D is a fluoroelastomer (FKM) material developed to offer superior long-term low compression set and heat ageing properties whilst operating at high temperature.

V80D has been engineered to retain its mechanical properties longer than conventional FKM grades combined with excellent chemical resistance to petroleum, silicone, air and diester-based fluids.

Meets Aerospace Specifications DTD5612A & DTD5543B Grade 80.

Available in any sized O-ring (fully moulded up to 2.5m/8ft internal diameter) and custom designed components.

Key Attributes

- ▶ Excellent long-term sealing performance
- ▶ Superior heat ageing properties for extended service life
- ▶ Superior chemical resistance especially in heavy fuel oil (HFO) at temperatures up to 150°C (302°F).

Typical Applications

- ▶ Mechanical seals
- ▶ Chemical pumps and valves
- ▶ Diesel engines
 - Injection systems
 - Cylinder heads
 - Exhaust valve seats up to 180°C (356°F)
- ▶ Couplings and quick connectors

Other materials available

V61C & V71C: ultra-low temperature FKM

V74C: ultra-low compression set FKM

V75J: high temperature steam resistant FKM

V75G: high quality FKM grade for diesel liner rings

Perlast® G80A: highly chemical resistant FFKM perfluoroelastomer

Perlast® G75B: high temperature FFKM perfluoroelastomer

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Typical Material Properties

Property	ASTM	ISO	Value
Material Type	FKM	FPM	Copolymer
Colour			Black
Hardness: (°IRHD)	D1415	ISO48	78
Tensile Strength (MPa)	D412	ISO37	15
Elongation at break (%)	D412	ISO37	180
Compression Set: 24 hrs @ 200°C (392°F)	D395	ISO815	11.5%
Minimum Operating Temperature			-20°C (-4°F)
Maximum Operating Temperature			+225°C (+437°F)
Heat Ageing: 72 hrs @ 250°C (482°F)	D573	ISO188	
Hardness change (points)	D1415	ISO48	+1 IRHD
Tensile strength change	D412	ISO37	-15
Elongation at break change	D412	ISO37	-10

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.