

# V70D

General purpose copolymer fluoroelastomer



## Description

V70D is a copolymer fluoroelastomer (FKM) of vinylidene fluoride and hexafluoropropylene.

This material has an operating temperature range between -20°C (-4°F) and +225°C (437°F). It offers resistance to a broad range of chemical media including air, petroleum, silicone and diester-based liquids, however it is not suitable for use in contact with certain phosphate-ester-based liquids.

V70D meets Aerospace Specifications DTD5612A and DTD5543B Grade 70.

V70D can be moulded into various shapes and custom profiles to suit specific application requirements.



## Key Attributes

- ▶ Meets Aerospace Spec DTD5621A Grade 70
- ▶ Meets Aerospace Spec DTD5543B Grade 70
- ▶ Broad chemical resistance to air, petroleum and diester-based liquids
- ▶ Excellent long term sealing performance
- ▶ Superior heat aging properties for extended service life

## Typical Applications

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

## Other materials in this range

V60D and V80D: Meets Aerospace DTD5612A & DTD5543B

V61C and V71C: Ultra-low temperature FKM

V74C: Ultra low compression set

V75J: High temperature steam resistance FKM

Heat Resistance	ASTM	ISO	Value
70 hrs @ 250°C (482°F)	D573	ISO188	
Hardness change (°IRHD)	D1415	ISO48	0
Tensile strength change (%)	D412	ISO37	-5
Elongation at break change (%)	D412	ISO37	-8

## Typical Material Properties

Property	ASTM	ISO	Value
Material Type	FKM	FPM	Copolymer
Colour			Black
Hardness: (°IRHD)	D1415	ISO48	70
Tensile Strength (MPa)	D412	ISO37	11
Elongation at break (%)	D412	ISO37	215
Compression Set: 24 hrs @ 200°C (392°F)	D395	ISO815	14%
Low temperature Rigidity (MPa) Torsional Modulus at -12°C	D1053		43
Minimum Operating Temperature			-20°C (-4°F)
Maximum Operating Temperature			+225°C (+437°F)

**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 to be used for specification purposes.