

# V71C

Ultra-low temperature fluoroelastomer



## Description

V71C is a Terpolymer FKM material developed to offer increased efficiency and service life in low temperature applications.

V71C extends the operational performance of FKM seals by a full 15°C lower than is possible with well established low temperature FKM grades. It sets a new industry benchmark in low temperature performance.

V71C exhibits the same chemical and mechanical properties as B-type and G-type FKM grades.

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

## Key Attributes

- ▶ With a glass transition of -40°C (-40°F), V71C offers the widest operating temperature range of -51°C to +225°C
- ▶ Low compression set giving excellent seal performance
- ▶ Good elongation properties making fitting easier even at low temperature
- ▶ Excellent resistance to petroleum, oil, silicone and di-ester liquids

## Typical Applications

- ▶ Valves and pumps in cold (Arctic) operating environments
- ▶ Mechanical seals
- ▶ Flow meters & sensors
- ▶ Seal applications that are exposed to cold situations or high temperature variations.

## Other materials available

V61C: softer ultra-low temperature FKM

V74C: ultra-low compression set FKM

FDA, USP & 3A compliant grades 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

Perlast® and ENDURA™ are registered trademarks of Precision Polymer Engineering Limited



## Typical Material Properties

Property	ASTM	ISO	Value
Material Type	FKM	FPM	Terpolymer
Colour			Black
Hardness: (°IRHD)	D1415	ISO48	72
Tensile Strength (MPa)	D412	ISO37	13
Elongation at break (%)	D412	ISO37	180
Compression Set: 24 hrs @ 200°C (392°F)	D395	ISO815	18.2%
Minimum Operating Temperature			-51°C (-60°F)
Maximum Operating Temperature			+225°C (+437°F)
Heat Ageing: 72 hrs @ 250°C (482°F)	D573	ISO188	
Hardness change (points)	D1415	ISO48	-7 RHD
Tensile strength change	D412	ISO37	-30%
Elongation at break change	D412	ISO37	+30%
Glass transition temperature (Tg)			-40°C

**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.

Low temperature operating parameters are based on SAE AMS 7379-2008.  
The material properties above should not to be used for specification purposes.