

Perlast® G77X

High Temperature Resistant FFKM

PERLAST®

Description

Perlast® G77X is a specially formulated high-temperature resistant perfluoroelastomer (FFKM) compound. It is the latest generation of FFKM which offers outstanding thermal resistance, lower compression set and enhanced sealing force retention at extreme temperatures.

Perlast® G77X is suitable for both dynamic and static applications and can be fully moulded into O-rings (any size up to 2.5m/8ft external diameter) and custom shapes.

Key Attributes

- ▶ Excellent thermal resistance at temperature (up to 350°C short term exposure)
- ▶ Enhanced physical properties including very low compression set
- ▶ Meets **AMS 7257E** requirements
- ▶ Offers broad chemical resistance in a wide variety of media including acids, caustics, ketones, aldehydes, esters, ethers, alcohols, solvents, sour gases and hydrocarbons (not recommended in severe aqueous, steam and amine applications)

Typical Applications

- ▶ General purpose use as O-rings or custom sealing component
- ▶ Designed for the chemical processing industry
- ▶ Aerospace
- ▶ Mechanical seals
- ▶ Valves
- ▶ Flanges

Other materials in this range

Perlast® G75B (High temperature steam)

Perlast® G80A (Amine service)



Typical Material Properties

Property	ASTM	Value
Material Type	FFKM	
Colour		Black
Hardness: (Shore A)	D2240	77
Tensile Strength (MPa)	D412	18
Elongation at break (%)	D412	170
Modulus @ 50% (MPa)	D412	3.2
Modulus @ 100% (MPa)	D412	9.1
Compression Set: 24hrs @ 330°C (626°F)	D395	25%
72hrs @ 330°C (626°F)	D395	45%
Heat Resistance: 70 hrs @ 290°C (554°F)	D573	
Hardness change (Shore A)	D1415	-3
Tensile strength change (%)	D412	-8.8
Elongation at break change (%)	D412	-2.7
Minimum Operating Temperature		-15°C (+5°F)
Maximum Operating Temperature	*	+350°C (+662°F)
Continuous Use Temperature	**	+310°C (+590°F)

* and ** PPE proprietary test methods

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.

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