

N70M

Nitrile Butadiene Rubber (NBR) for the oilfield industry

Description

N70M is a NBR copolymer that provides excellent resistance to petroleum based oils and fuels.

N70M has been developed to offer excellent mechanical properties such as compression set, tear and abrasion resistance, making it ideal for dynamic applications. Good water resistance is also a characteristic of this material.

Meets BS2751 BA70 and ASTM D2000/SAE J200 line call-out M2BG 714, B14, EA14, EF11, EF21, EO14, EO34 and F17.

Key Attributes

- ▶ Low temperature flexibility
- ▶ Stability to mineral oils and hydraulic fluids
- ▶ Good resilience

Typical Applications

Topside pipe systems
General purpose sealing applications

Other materials for oilfield applications

EnDura® range of ED resistant elastomers
Perlast® perfluoroelastomers (FFKM)
V95X - A general purpose copolymer fluoroelastomer (FKM)
Z85L (HNBR)

Heat Resistance	ASTM	ISO	Value
70 hrs @ 100°C (212°F)	D573	ISO188	
Hardness change (°IRHD)	D1415	ISO48	10 to -5
Tensile strength change (%)	D412	ISO37	±5
Elongation at break change (%)	D412	ISO37	-20
168 hrs @ 70°C (158°F)			
Hardness change (°IRHD)	D1415	ISO48	+2
Tensile strength change (%)	D412	ISO37	+5
Elongation at break change (%)	D412	ISO37	-7
Low Temperature Resistance			
Non-brittle after 3 minutes at			-40°C
Low temperature Modulus at -30°C			5.5 Mpa



Typical Material Properties

Property	ASTM	ISO	Value
Material Type	NBR	NBR	Copolymer
Colour			Black
Hardness: (°IRHD)	D1415	ISO48	75
Tensile Strength (MPa)	D412	ISO37	14.0
Elongation at break (%)	D412	ISO37	350
Modulus @ 50% (MPa)			2.5
Modulus @ 100% (MPa)			5.0
Compression Set: 24 hrs @ 100°C (212°F)	D395	ISO815	25%
Minimum Operating Temperature			-40°C (-40°F)
Maximum Operating Temperature			+121°C (+250°F)
Fluid Resistance 22 hrs @ 40°C (104°F) in liquid B	D471	ISO1817	18

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.

EnDura® is a registered trademark of Precision Polymer Engineering Ltd