

N70F

Nitrile Butadiene Rubber (NBR) for food and dairy applications

Description

N70F is a copolymer of acrylonitrile and butadiene, formulated using only those ingredients determined by the United States Federal Food and Drug Administration (FDA) to be in accordance with Code of Federal Regulations Title 21 (CFR21), Section 177.2600 and Section 180.22.

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

Key Attributes

- ▶ FDA compliant - extraction tested to CFR 21 § 177.2600 (e,f)
- ▶ 3A Sanitary Standard 18-03 Class 2 compliant
- ▶ Free from Animal Derived Ingredients

Typical Applications

Recommended for use in equipment associated with the production of foodstuffs intended for human consumption.

- ▶ O-rings
- ▶ Gaskets
- ▶ Hygienic/sanitary couplings & pipe connectors
- ▶ Valves
- ▶ Pumps
- ▶ Metering equipment

Other materials available

Z70F FDA and 3A compliant HNBR (black)
E70Q FDA and 3A compliant EPDM (black)
Perlast® perfluoroelastomers (FFKM)



Typical Material Properties

Property	ASTM	ISO	Value
Material Type	NBR	NBR	Copolymer
Colour			Black
Hardness: (°IRHD)	D1415	ISO48	70
Tensile Strength (MPa)	D412	ISO37	10.0
Elongation at break (%)	D412	ISO37	250
Compression Set: 24 hrs @ 70°C (158°F) 24 hrs @ 100°C (212°F)	D395	ISO815	22% 28%
Minimum Operating Temperature			-40°C (-40°F)
Maximum Operating Temperature			+121°C (+248°F)
Low temperature resistance: Non-brittle for 3 mins @	D2137	ISO R812	-40°C (-40°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 be used for specification purposes.

FDA Extraction test results			
FDA Regulation	Extraction test	Authorised limits mg/sq.inch	N70F test results
Distilled water	First 7 hours	20	1.6, 1.6
	2 succeeding hrs	1	0.3, 0.4
n-Hexane	First 7 hours	175	19.7, 21.5
	2 succeeding hrs	4	2.0, 2.0
Acrylonitrile monomer		3	1.0

