

Z93B

Medium acrylonitrile (ACN) Hydrogenated Nitrile Butadiene Rubber (HNBR)



Description

Z93B is a Copolymer of acrylonitrile and butadiene with a medium ACN content of 30 - 45%.

HNBR materials typically provide superior heat resistance, excellent mechanical properties, combined with exceptional resistance to oils, hydrogen sulphide, amines present in crude oil, high energy radiation, ozone and weathering.

Z93B is accepted by the UK Ministry of Defence (MOD) to Defence Standard 02-337 part 1, issue 2 (NES 337) for use on naval ships and submarines.

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

Key Attributes

- ▶ Excellent chemical resistance
- ▶ Excellent wear resistance and mechanical properties
- ▶ Accepted by M.O.D. to Def. Stan. NES 337
- ▶ Meets ASTM D2000/SAE J200 line call-out M4DH716, A26, B36, EO16, EO36, F17.

Typical Applications

- ▶ Naval ships and submarines
- ▶ Oilfield applications

Other NES337 materials available

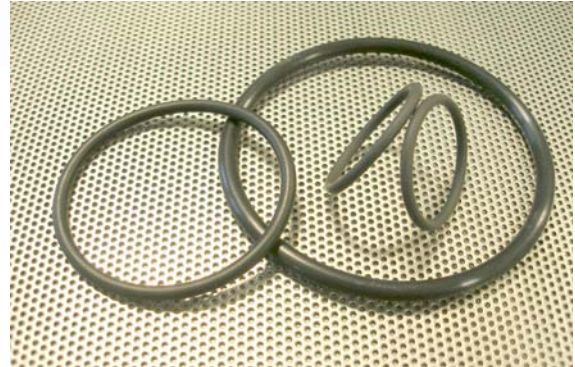
Medium ACN Nitrile materials in 60, 70, 80 and 90 hardness

High ACN Nitrile materials in 60, 70, 80 and 90 hardness

HNBR materials in 70 and 80 hardness

V72G FKM fluoroelastomer (green) 70 hardness

PPE O-ring parts are listed on the ISIS system under NCAE reference number U6183.



Typical Material Properties

Property	ASTM	ISO	Value
Material Type	HNBR	HNBR	Copolymer
Colour			Black
Hardness: (°IRHD)	D1415	ISO48	92
Tensile Strength (MPa)	D412	ISO37	22.0
Elongation at break (%)	D412	ISO37	195
Compression Set: 24 hrs @ 135°C (275°F)	D395	ISO815	18%
Minimum Operating Temperature			-30°C (-22°F)
Maximum Operating Temperature			+180°C (+356°F)
Heat Ageing: 70 hrs @ 150°C (302°F)	D573	ISO188	
Hardness change (points)	D1415	ISO48	+3 IRHD
Tensile strength change	D412	ISO37	+10%
Elongation at break change	D412	ISO37	-25%
Low temperature resistance: Non-brittle after 3mins at			-25°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 be used for specification purposes.