

Precision Polymer N93B

Acrylonitrile Butadiene Rubber

Precision Polymer Engineering Ltd.

Message:

N93B is a Copolymer of acrylonitrile and butadiene with a medium ACN content of 30 - 45%.
NBR materials typically provide excellent resistance to petroleum-based oils, fuels and greases, as well as, very low gas permeability, ozone resistance, plus exceptional heat ageing and mechanical properties.
N93B is accepted by the UK Ministry of Defence (MOD) to Defence Standard 02-337 part 1, issue 1 (NES 337) for use on naval ships and submarines.
Material code MN90.
Available in any sized O-ring (fully moulded up to 2.5m/8ft internal diameter) and custom designed components.

Key Attributes
Excellent resistance to aliphatic hydrocarbon oils, fuels and greases.
Very low gas permeability
Accepted by M.O.D. to Def. Stan. NES 337

Typical Applications
Naval ships and submarines
Aerospace Applications

General Information			
Features	Copolymer		
	Good heat aging resistance		
	Ozone resistance		
	Fuel resistance		
	Oil resistance		
	Grease resistance		
Uses	Ship application		
	Aerospace applications		
Hardness	Nominal Value		Test Method
IRHD Hardness	88		ASTM D1415, ISO 48
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	19.0	MPa	ASTM D412, ISO 37
Tensile Elongation (Break)	280	%	ASTM D412, ISO 37
Compression Set (70°C, 24 hr)	6.5	%	ASTM D395, ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (100°C, 168 hr)	8.0	%	ASTM D412, ISO 37
Change in Ultimate Elongation in Air (100°C, 168 hr)	-29	%	ASTM D412, ISO 37
Change in IRHD Hardness in Air (100°C, 168 hr)	3.0		ASTM D573, ISO 188
Thermal	Nominal Value	Unit	
Maximum Operating Temperature	120	°C	

Low Temperature Resistance - Non-brittle
after 3 mins

-20

°C

Additional Information

Nominal Value

Unit

Minimum Operating Temperature: -30°C (-22°F)

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