



NBR Nitrile Butadiene Rubber

Design Description

Nitrile has excellent resistance to petroleum products and its ability to be compounded for service over a wide temperature range has made it a very popular material.

Nitrile has an average temperature range as well as chemical resistance to petroleum-based oils, but decreases low temperature flexibility. Nitrile provides good compression set and tear resistance, cold flow and abrasion resistance. The major limiting properties of Nitrile are its poor ozone and weather resistance and moderate heat resistance.

Features

- Good mechanical resistance
- Resistance to fuel, Mineral oils and common solvents
- Low compression set
- Good heat resistance up to 1000C
- Preferred material

Properties	Standard	Unit	Value
Hardness	DIN 53505	Shore A	87 ± 3
Density	DIN 53479	g/cm ³	1.28
Tensile strength	DIN 53504	MPa	18
Elongation at break	DIN 53504	%	300
Tensile strength @ 100% Elongation		MPa	10
COMPRESSION SET			
22h/100°C	ASTM D 395B	%	24
Tear strength	DIN 3507	N/mm	33
Abrasion	DIN 53516	mm ²	130
Min. application temp		°C	-30
Max application temp		°C	100
IMMERSION IN ASTM OIL #3 OIL acc to DIN 52521 70h 1000C			
Shore hardness change	DIN 53505	Shore A	+5
Volume change	DIN 53521	%	+16
Tensile strength change			-18