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Rubber ball NBR

Balls made of unsaturated acrylonitrile and butadiene copolymers. They have good resistance to wear, abrasion, heat and compression. Excellent compatibility when in contact with plastic. Low aging resistance. For these types of soft material, limited tolerances are obtained.

Field of application

Pumps and safety valves (as a sealing element), pneumatic and hydraulic applications.

Corrosion resistance

The NBR balls are resistant to contact with hydraulic fluids, lubricating oils, transmission fluids, non-polar petroleum products, aliphatic hydrocarbons, mineral oils, many dilute acids, bases and saline solutions at ambient ambient temperature. Also resistant to air and aqueous environments. Unstable to aromatic or chlorinated hydrocarbons or polar solutions, ozone, ketone, esters, aldehydes.

Material

Technical name	Alternative name	Abbreviation
Acrylonitrile Butadiene	Buna-N, Nitrile	NBR

Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	δ	g/cm^3	Physical	Environmental temp.	1,20 - 1,40
Modulus of elasticity	E	MPa	Mechanical	-	3,5
Elongation at break	A	%	Mechanical	Environmental temp.	≤ 700
Compression set	-	%	Mechanical	Environmental temp.	25
Coefficient of friction	μ	-	Mechanical	Environmental temp.	0,90
Linear coefficient of thermal expansion	α	10^{-6}/°C	Thermal	(ΔT = 0 - 100°C)	170
Thermal conductivity	λ	W/(m*K)	Thermal	Environmental temp.	0,25
Electrical resistivity	ρ	Ω*mm^2/m	Electrical	-	> 10^{19}
Relative magnetic permeability	μ	-	Magnetic	Diamagnetic	< -1

Technical characteristics

Characteristic	Type	Unit	Type	Unit	Value
Hardness	Mechanical	Shore A	75 - 90	-	-
Break load in traction	Mechanical	MPa	15 - 20	psi * 10^3	2,15 - 2,90
Operating temperature	Thermal	° C	-50 - 80	° F	-58 - 176

Available with		
Diameter min/max (mm)	**Diameter min/max (in)**	**Precision grade**
1,000 - 152,400	3/64 - 6	III

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