

Properties of Rubber (NR, NBR, CR, EPDM)

Property	Natural Rubber (NR)	Nitrile Rubber (NBR)	Chloroprene Rubber (Neoprene)	Ethylene Propylene Diene Monomer Rubber(EPDM)
Abbreviations (ASTM D 1418)	NR	NBR	CR	EPDM
Hardness (Shore A) (±5)	40-90	45-90	40-90	40-90
Resistance to tearing (N/mm <sup>2</sup> )	4-15	4-14	4-15	6-13
Spring-back elasticity at 20°C	++	0	+	+
Abrasion resistance	++	+	+	+
Chemical resistance	+	0	+	++
Oil resistance	-	++	+	-
Fuel resistance	none	+	-	-
Solvent resistance	-	+	+	0
Temperature resistance (°C)	-40 to +80	-30 to +100	-25 to +100	-40 to +120
Ozone resistance	0	0	++	++
Weather exposure resistance	+	+	++	++
Gas penetration resistance	0	+	+	0
Resistance to permanent deformation	++	+	+	+
Binding to metal	++	0	+	0
Dielectric qualities	++	-	0	++

Rating Explanation

++ = Perfect or very good                      + = Good                      0 = Average qualities                      - = Poor qualities

Notes

1. Chemical resistance: Stated qualities may vary due to the variety of chemicals, exposure temperatures and durations.
2. Resistance to tearing, abrasion and permanent deformation: The properties of the rubber deteriorate at relatively high or low temperatures.
3. Temperature resistance: Stated ranges are accurate under normal circumstances; extreme strains or environments will reduce the actual applicable range.