



## 309 - Acrylonitrile Butadiene Rubber, Nitrile or Buna N (NBR)

Temperature Range: -35°C to +120°C (-30°F to +250°F),

Acrylonitrile or Nitrile as it's more commonly referred to is a copolymer of Acrylonitrile and Butadiene. The Nitrile content varies in commercial products from 18% to 50%, the higher the Nitrile content the better the resistance to petroleum oils and hydrocarbon fuels, but low temperature flexibility decreases.

As Nitrile has an excellent resistance to petroleum products, and an ability to be compounded for service over a wide temperature range, Nitrile is the most widely used elastomer in the seal industry today. Nitrile compounds are superior to most elastomers with regard to compression set, tear, and abrasion resistance but have limited resistance to ozone, sunlight, or weather. To obtain good resistance to lower temperatures, it is often necessary to sacrifice some high temperature resistance. Nitrile should not be kept near electric motors or other ozone generating equipment and should not be kept in direct sunlight.

Nitrile is the standard material for hydraulics and pneumatics; it has good resistance to oil-based hydraulic fluids, fats, animal and vegetable oils, flame retardant liquids (HFA, HFB, HFC), grease, water, and air. Special low-temperature compounds are available for mineral oil-based fluids. By hydrogenation, carboxylic acid addition, or PVC blending, the Nitrile polymer can meet a more specified range of physical or chemical requirements.

Our Ref	Specification	Hardness IRHD	SG	Tensile Strength (MPa)	Elongation at Break %	Colour
ABA40	BS2751:BA40	40°	1.20	7	600	Black
A502	Commercial	50°	1.40	4	250	Black
A501	Commercial	50°	1.27	5	350	Black
ABA50	BS2751:BA50	50°	1.20	8	450	Black
A601	Commercial	60°	1.45	4	200	Black
A608	High Grade	60°	1.16	11	400	Black
A604	Food Quality	60°	1.32	11	500	White
ABA60	BS2751:BA60	60°	1.32	13	500	Black
A658	High Grade	65°	1.45	7	250	Black
A656B	Food Quality	65°	1.40	8	500	Blue
A656W	Food Quality	65°	1.40	8	500	White
A701	Commercial	70°	1.48	4	250	Black
A708	High Grade	70°	1.49	10	330	Black
A707	Insertion/Reinforced	70°	1.48	-	-	Black
ABA70	BS2751:BA70	70°	1.20	15	350	Black
ABA80	BS2751:BA80	80°	1.30	13	325	Black

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