Nitrile Butadiene (NBR) is a copolymer of acrylonitrile and butadiene, and is available in various ratios of these monomers. NBR has good oil and gasoline resistance, tensile strength, elongation properties, heat resistance and low compression set. Special compounding is required for good weather ability. Nitrile is the one of the most widely used rubber materials due to its combination of low cost, resistance to many chemicals, and good physical properties. The acrylonitrile content of this highly polar elastomer provides excellent oil and gas permeation resistance, which increases as the level of ACN increases. Typical ACN content ranges from 18% to 50%. Nitrile should not be exposed to direct sunlight or moderate to high levels of atmospheric ozone, as rapid deterioration will result.

Limitations: Is generally attacked by ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons.

Temperature Resistance: -40°C to 120°C (-40° to 248°F)

Typical Uses: O-Rings, Automobile Gaskets, Oil Seals, Boots, Bellows, LPG Diaphragms, Hydraulic Hoses,

Physical Properties:

	Excellent	Good	Fair	Poor
Tensile strength		•		
Elongation		•		
Low temperature flexibility		•		
Compression Set		•		
Tear resistance		•		
Abrasion resistance	•			
Flame resistance				•
Gas permeability		•		

Chemical Resistence:

	Excellent	Good	Fair	Poor
Water	•			
Petroleum oil	•			
Silicone lubricants	•			
Dilute acids		•		
Dilute alkalis		•		
Hydraulic fluids		•		
Transmission fluid		•		
Steam			•	
Ozone				•
Weather				•
Ketones				•
Strong acids				•