

# NBR RUBBER

## Synthetic Rubbers

Nitrile butadiene rubber is a family of unsaturated copolymers of 2-propenenitrile and various butadiene monomers. Although its physical and chemical properties vary depending on the polymer's composition of nitrile, this form of synthetic rubber is unusual in being generally resistant to oil, fuel, and other chemicals



Nitrile Butadiene Rubber, commonly known as **NBR** or Buna-N, is formulated for hydrocarbon service. It is used extensively in the petroleum and natural gas industries, and in applications such as water, sewer, mineral oil, and vegetable oil.



ASTM Designation	ORIGINAL PROPERTIES	ASTM D2000 SPECIFICATION
	Durometer, Shore A	70+/- 5
	Tensile, psi (MPa), Minimum	2031 (14)
	Elongation, % Minimum	250
	Specific Gravity	-
	HEAT AGE, 70 HRS @ 100 C	
	Durometer Change, Points	+/- 15
	Tensile Strength Change, % Maximum	+/- 30
	Elongation Change, % Maximum	-50
B14	COMPRESSION SET, 22 HRS @ 100 C	
	Original Deflection, % Maximum	25 (Button)
EA14	WATER RESISTANCE, 70 HRS @ 100C	
	Durometer Change, Points	+/-10
	Volume Change, %	+/-15
EF11	FUEL A RESISTANCE, 70 HRS @ 23C	
	Durometer Change, Points	+/-10
	Tensile Change, % Maximum	-25
	Elongation Change, % Maximum	-25
	Volume Change, %	-0.5
EF21	FUEL B RESISTANCE, 70 HRS @ 23C	
	Durometer Change, Points	0/-30
	Tensile Change, % Maximum	-60
	Elongation Change, % Maximum	-60
	Volume Change, % Maximum	0/+40
EO14	ASTM #1 OIL, 70 HRS @ 100C	
	Durometer Change, Points	-0.5
	Tensile Change, % Maximum	-25
	Elongation Change, % Maximum	-45
	Volume Change, %	-2
EO34	ASTM #3 OIL, 70 HRS @ 100C	
	Durometer Change, Points	-2
	Tensile Change, % Maximum	-45
	Elongation Change, % Maximum	-45
	Volume Change, % Maximum	0/+25
F17	LOW TEMPERATURE BRITTLENESS ASTM D2137 Method A, 9.3.2	Pass

## NBR

### Properties

- **ASTM D-2000 Classification: BF, BG, BK**
- **Resistance: Excellent**
- **Adhesion to Metals: Good to Excellent**

### Benefits Advantages

- **Oil resistant**
- **Resistant to heat aging**
- **Compounded for service of temps up to 250 F**

### Applications

- **Sealing**
- **Automotive**
- **Bowling Pin Setters**
- **Oil & Gas**