

## O-Ring Compounds and Properties

**Note:** The values shown will vary depending on the compound and manufacturer and should only be used as a guide. These are the most common elastomers. There are many more not listed here. Please inquire and we will be happy to recommend a suitable compound for your application.

**Nitrile (Buna-N):** Probably the most commonly used o-ring compound. Excellent resistance to petroleum products. Usually not used where sunlight, ozone or weather resistance is needed. Very good compression set, tear resistance and abrasion resistance.

Durometer range: 20-95 Shore A

Tensile range: 200-3000 PSI

Elongation: 600 %Max.

Temperature range = - 40° to +250° F.

**Highly Saturated Nitrile (HNBR, HSN):** A modified, higher level **Nitrile**. Better physical properties and chemical resistance. Higher temperature resistance (325°F). More resistant to ozone and sunlight. Good compression set. Green HSN is used in many R134a refrigerant systems.

### **QUALITY SEALS**

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**Fluorocarbon Rubber (FKM):** Sometimes referred to as Viton®. High temperature resistance to beyond +400°F and some specially blended FKM's are able to tolerate to -60°F. Excellent chemical resistance as well as low permeability. Low compression set.

Durometer range: 60-90 Shore A

Tensile range: 500-2000 PS

Elongation: 300 %Max.

**Ethylene Propylene (EP, EPT, EPDM, EPM):** Good in hot water, steam, some acids, alkalies and ozone. Good with Skydrol and phosphate ester types of hydraulic fluids. Not for use with petroleum based fluids or diester lubricants.

Durometer range: 30-90 Shore A

Tensile range: 500-2500 PSI

Elongation: 600 %Max.

Temperature range: -65°F to +300°F.

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**Chloroprene: (Neoprene®):** Good compression set. Good in refrigeration fluids like Freon®. Fair in petroleum based products. Good ozone and weather resistance. Abrasion resistance and tear resistance both good.

Durometer range: 20-95 Shore A

Tensile range: 500-3000 PSI

Elongation: 600 %Max.

Temperature range: -65°F to +250°F

**Silicone:** Good dry heat resistance. Good weather and ozone resistance.

Limited petroleum resistance. Poor tensile and tear strength. Low abrasion resistance. Used primarily in static applications

Durometer range: 30-90 Shore A

Tensile range: 200-1500 PSI

Elongation: 700 %Max.

Temperature range: -150°F to +450°F.

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