# TABLE OF PROPERTIES

## O-RINGS

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### PROPERTIES

- **Compression set resistance**
  - Very Good
  - Excellent
  - Very Good
  - Poor

- **Continuous high temp. limit**
  - 250°F, 121°C
  - 450°F, 150°C
  - 400°F, 204°C
  - 300°F, 149°C

- **Dynamic service/abrasion resistance**
  - Excellent
  - Poor
  - Very Good
  - Poor

- **Hardness range, "A" scale**
  - 40-90
  - 60-80
  - 50-90

- **Low temp. capability**
  - -40°F, -40°C
  - -75°F, -59.5°C
  - -70°F, -57°C

- **Relative o-ring cost**
  - Low
  - Moderate
  - Mod./High
  - High
  - Low

### FLUID COMPATABILITY SUMMARY

**Acid, inorganic**
- Fair
- Good
- Excellent
- Excellent

**Acid, organic**
- Good
- Excellent
- Good
- Very Good

**Aging (oxygen, ozone, weather)**
- Fair/Poor
- Excellent
- Very Good
- Excellent

**Air**
- Fair
- Excellent
- Very Good
- Very Good

**Alcohols**
- Very Good
- Very Good
- Fair
- Very Good

**Aldehydes**
- Fair/Poor
- Good
- Poor
- Poor

**Alkalis**
- Fair/Good
- Very Good
- Good
- Excellent

**Amines**
- Poor
- Good
- Poor
- Very Good

**Animal oils**
- Excellent
- Good
- Very Good
- Excellent

**Esters, Aryl Phosphate (Skydrol)**
- Fair/Poor
- Good
- Poor
- Excellent

**Esters, Silicate**
- Good
- Poor
- Excellent
- Very Good

**Ethers**
- Poor
- Poor
- Poor
- Fair

**Gasoline**
- Poor
- Fair
- Fair
- Fair

**Hydrocarbon fuels, Aliphatic**
- Excellent
- Fair
- Excellent
- Excellent

**Hydrocarbon fuels, Aromatic**
- Good
- Poor
- Excellent
- Poor

**Hydrocarbon fuels, Halogenated**
- Fair/Poor
- Poor
- Excellent
- Very Good

**Hydrocarbon oils, High Aniline**
- Excellent
- Very Good
- Excellent
- Poor

**Hydrocarbon oils, Low Aniline**
- Very Good
- Fair
- Excellent
- Poor

**Impermeability to gases**
- Good
- Poor
- Very Good
- Poor

**Ketones**
- Poor
- Poor
- Poor
- Fair/Poor

**Silicone oils**
- Excellent
- Good
- Excellent
- Excellent

**Vegetable Oils**
- Excellent
- Excellent
- Excellent
- Excellent

**Water/steam**
- Good
- Fair
- Fair
- Excellent

**MATERIAL**

- **NITRILE (Buna N)(NBR)**
  - Excellent general sealing characteristics
  - Excellent resistance to petroleum
  - Good resistance to oils and fluids
  - Can service a wide variety of temps.
  - Low cost
  - Poor weather resistance
  - Poor resistance to strong acids

- **SILICONE RUBBER (Si)**
  - Excellent high/low temp resistance
  - Excellent resistance to dry heat
  - Excellent compression set (cold flow) resistance
  - Can service a wide variety of temps.
  - Poor physical strength
  - Poor resistance to petroleum products
  - Poor dynamic sealing

- **FLUOROCARBON RUBBER (Viton) (FKM)**
  - Excellent resistance to petroleum products
  - Excellent resistance to organic acids
  - Excellent high temperature resistance
  - Good Compression set resistance
  - Moderate low temperature resistance
  - High cost

- **FLUOROSILICONE (FSi)**
  - Good heat resistance
  - Good resistance to petroleum products
  - Good low temperature resistance
  - Good abrasion resistance
  - Relatively low cost
  - Good chemical resistance
  - Poor physical strength and abrasion resistance
  - High cost

- **ETHYLENE-PROPYLENE (EP)**
  - Excellent weather resistance
  - Good high/low temperature resistance
  - Good abrasion resistance
  - Relatively low cost
  - Good chemical resistance
  - Poor resistance to petroleum products

### NOTES

- **ASTM D2000 Prefix**
- **ASTM D1418 Designation**
- **Compressibility**
- **Continuous high temp. limit**
- **Dynamic service/abrasion resistance**
- **Hardness range, "A" scale**
- **Low temp. capability**
- **Relative o-ring cost**

This data has been obtained from numerous sources. While it is believed to be correct, we cannot assume responsibility for its use.