SIMRIZ® 481 LOW TEMPERATURE FFKM MATERIAL



Designed for thermal stability and nearly universal protection against chemical attack, Freudenberg's proprietary family of Simriz® perfluoroelastomer compounds offer premier sealing performance. Simriz® compounds approach PTFE chemical resistance while resisting high temperatures up to 325 °C.

Freudenberg Sealing Technologies is the only vertically integrated supplier of perfluoroelastomer.
Traceable – Accountable – Customized – Controlled.

Simriz® 481 performs well in a wide variety of harsh chemicals. Its outstanding low temperature performance makes the Simriz® 481 the perfect match for nearly every application in the chemical process industry especially where low temperatures are expected.

VALUES FOR THE CUSTOMER

- Without equal. Patented cross-linking system provides superior performance beyond the limits of every other competitor FFKM product
- Demonstrated performance. Successfully used in many customer applications
- Vertically integrated. Freudenberg Sealing Technologies is the only vertically integrated O-ring manufacturer in the world
- Cost efficient. As the only vertically integrated O-ring manufacturer down to the monomers Freudenberg Sealing Technologies is able to provide the most cost efficient FFKM O-rings

FEATURES AND BENEFITS

- Broad chemical resistance in a large number of harsh chemical environments (e.g. strong acids, strong bases)
- Outstanding low temperature performance (-30 °C/-22 °F)
- Low compression set resulting in an increased product life time

TYPICAL APPLICATIONS

- Pumps
- Valves
- Mechanical Seals
- Dispenser Systems
- Vacuum Components
- Mixers

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FEATURES AND BENEFITS

Mechanical Properties	
Hardness (Shore) DIN ISO 7619-1, Shore A, 23 °C	75
Temp. Range in °C	-30 °C to +230 °C
Temp. Range in °F	-22 °F to +446 °F
Tensile Strength (psi)	2480
Tensile Strength (MPa)	17.1
Elongation (%)	260
Compression Set (%) 70hr at 204 °C (400 °F) per ASTM D395 - Method B	27

Chemical Environment	
Hot Water / Steam	++
Dry Heat	+
Organic Acid (e.g. Acetic Acid)	-
Inorganic Acids (e.g. Nitric Acid)	-
Alkalis / Bases	++
Acrylic or Vinyl Monomers	++
Amines	++
Hot Amines	++
Ketones	++
Ester	++
Ethers	++
Aldehydes	++
Hydrocarbons	++
Sour Gas (e.g. Hydrogen Sulfide, Peroxide)	++
Silanes and Chlorosilanes	++
Hot Lubricants	++
Strong Oxidizers (e.g. Nitric Acid, O_3, ClO_3)	-
Fluorinated Fluids	++
Synthetic Oils	++
Alcohols	++

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