

# SIMRIZ® 481 LOW TEMPERATURE FFKM MATERIAL



Designed for thermal stability and nearly universal protection against chemical attack, Freudenberg–NOK’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-NOK 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.

## 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

## 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-NOK 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-NOK Sealing Technologies is able to provide the most cost efficient FFKM O-rings

## TYPICAL APPLICATIONS

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



Mechanical Properties	
Hardness (Shore) DIN ISO 7619-1, Shore A, 23°C	70
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 <sub>3</sub> , ClO <sub>2</sub> )	-
Fluorinated Fluids	++
Synthetic Oils	++
Alcohols	++

The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.

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