

# SIMRIZ® 502 FOR OIL & GAS APPLICATIONS



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.

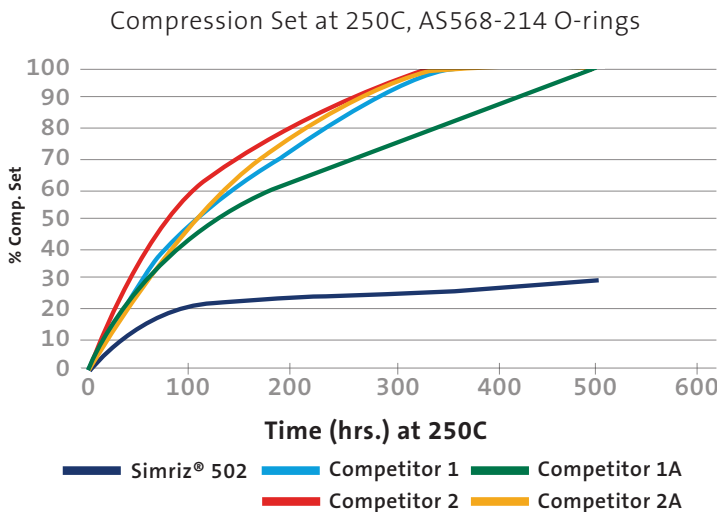
**Simriz® 502** is the ultimate FFKM material designed to fit the highly demanding requirements of oil & gas applications and the CPI market. Its unique patented material structure provides outstanding long-term performance in nearly every environment. No matter if it’s extreme temperatures up to 325°C or harsh chemicals or even superheated steam and hot water. Simriz® 502 is the best match.

## VALUES FOR THE CUSTOMER

- Excellent RGD (Rapid Gas Decompression) resistance
- Superior long-term performance in extreme temperatures
- Broad chemical resistance in a large number of harsh chemical environments
- Outstanding performance under steam and hot water conditions

## TYPICAL APPLICATIONS

- Drilling Tools
- Wireline Tools
- Perforating Equipment
- Completion Equipment
- Valves
- Pumps
- Mechanical Seals
- Steam / Hot Water Injection
- Enhanced Oil Recovery / SAGD





## FEATURES AND BENEFITS

Mechanical Properties	
Hardness (Shore) DIN ISO 7619-1, Shore A, 23°C	90
Temp. Range in °C	-6°C to +325°C
Temp. Range in °F	+21°F to +617°F
Tensile Strength (psi)	4,292
Tensile Strength (MPa)	29.6
Elongation (%)	110
Compression Set (%) 70hr at 204°C (400°F) per ASTM D395 - Method B	15

Chemical Environment	
Hot Water / Steam	Excellent
Dry Heat	Excellent
Inorganic Acid (e.g. Nitric Acid)	Excellent
Alkalis / Bases	Excellent
Amines	Excellent
Hot Amines	Excellent
Hydrocarbons	Excellent
Sour Gas (e.g. Hydrogen Sulfide, Peroxide)	Excellent
Strong Oxidizers (e.g. Nitric Acid, O <sub>3</sub> , ClO <sub>2</sub> )	Excellent

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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