

Material Profile: Simriz® 485

Simriz 485 was developed as a general use perfluoroelastomer compound. Simriz 485 offers excellent chemical compatibility in a wide range of industrial applications.

Features and Benefits

- Wide chemical compatibility
- Meets ASTM D200

Recommended Applications

- | | |
|-------------------------------------|---------------|
| ■ Acids | ■ Ethers |
| ■ Bases | ■ Esters |
| ■ Alcohols | ■ Ketones |
| ■ Aldehydes | ■ MEK |
| ■ Amines | ■ Nitric Acid |
| ■ Triethylamine | ■ Oxidizers |
| ■ Sodium Hydroxide | |
| ■ Steam/Hot Water | |
| ■ Chemical & Hydrocarbon Processing | |
| ■ Aromatic/Aliphatic Oils | |



Black Perfluoroelastomer
 Service Temperature Range: 19 to 450°F

Typical Physical Properties

Color	Black
Shore A Durometer	75
Tensile Strength, psi (MPa)	2690 (18.5)
Elongation	195%
Compression Set: 70 hrs. at 200°C	25%
Service Temperature Range, °C (°F)	-7 to 230 (19 to 450)

NOTE - International Seal, Co. (ISC) is a wholly owned subsidiary of Freudenberg-NOK.

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.

Pub#2514PIC
 © Copyright FNGP 2007

Material Properties: Simriz® 485 (FFKM)

NOTE - All testing done on AS568-214 size O-rings

Original Properties	Simriz 485
Color	Black
Hardness, Shore A, ASTM D2240	76
Tensile Strength, MPa, ASTM D1414	18.5
Tensile Strength, psi, ASTM D1414	2680
Ultimate Elongation, %, ASTM D1414	195
100% Modulus, MPa, ASTM D1414	5.7
100% Modulus, psi, ASTM D1414	825
Temperature Retraction, ASTM D1329	
TR-10, degrees C	-4
Compression Set, ASTM D1414 and ASTM D395 Method B, AS568-214 size O-rings, times and temperatures as noted	
% Permanent Set, 70 hours at 200°C	23
% Permanent Set, 500 hours at 200°C	31
% Permanent Set, 1,000 hours at 200°C	40
% Permanent Set, 70 hours at 250°C	45
Water Bomb Immersion, ASTM D471, 70 hrs. at 200°C	
Volume Change, %	+5.1
Steam Immersion, ASTM D471, times and temperatures as noted	
% Volume change, 70 hours at 160°C	+2.0
% Volume change, 500 hours at 160°C	+3.0
% Volume change, 1,000 hours at 160°C	+3.0
Hexamethylene Diamine Immersion, ASTM D471, 70 hrs. at 140°C	
% Volume change	+6.8
Acetone Immersion, ASTM D471, 70 hrs. at 23°C	
% Volume change	+0.5
20% Nitric Acid Immersion, ASTM D471, 70 hrs. at 100°C	
% Volume change	+12.0

NOTE - International Seal, Co. (ISC) is a wholly owned subsidiary of Freudenberg-NOK.

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.

Pub#2514
© Copyright FNGP 2007