

# SIMRIZ® 508 AND 508CP FOR ULTIMATE SEMI-CON APPLICATIONS



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 is the only vertically integrated supplier of perfluoroelastomer. Traceable - Accountable – Customized - Controlled

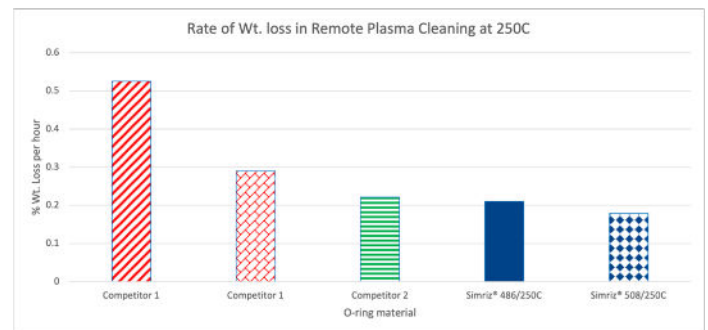
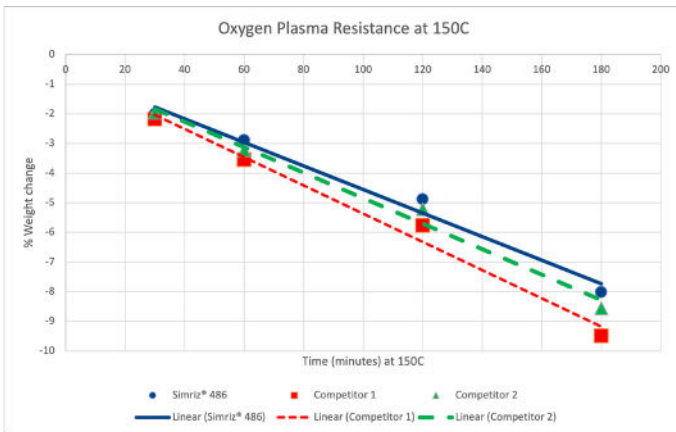
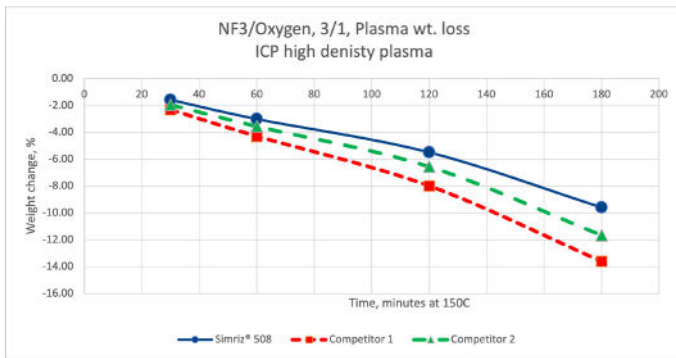
Simriz® 508 and 508CP, with optional post process cleaning and packaging available. The ultimate FFKM material designed to fit the highly demanding requirements of Semi-Con applications like Wet Processing, HDPCVD, PECVD and remote plasma cleaning. Its unique patented material structure provides outstanding long-term performance in nearly every environment. Choose Simriz® 508 for applications with extreme temperatures up to 325°C or harsh chemicals.

## VALUES FOR THE CUSTOMER

- Superior long-term performance in extreme temperatures
- Broad chemical resistance in a large number of harsh chemical environments
- Outstanding resistance in high energy oxygen plasma etching (PECVD)
- Outstanding resistance in remote plasma etching and ashing
- Best TGA thermal stability
- Outstanding high temperature compression set
- High purity to reduce contamination risk

## TYPICAL APPLICATIONS

- Deposition: CVD, APCVD, HDPCVD, PECVD, RPCVD, SACVD
- Remote Plasma Cleaning
- High temperature chemical cleaning
- Chamber lid and Window seals
- Jar/Gate/Pendulum/Exhaust Valves
- Window seals
- Isolator valve seals





## FEATURES AND BENEFITS

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

Original Properties	
Color	off-white
Hardness, Shore A, ASTM D2240	75
Tensile Strength, MPa, ASTM D1414	15.7
Tensile Strength, psi, ASTM D1414	2277
Ultimate Elongation, %, ASTM D1414	246
100% Modulus, MPa, ASTM D1414	4.9
100% Modulus, psi, ASTM D1414	711
Temperature Retraction, ASTM D1329	
TR-10, degrees C	0
Compression Set, ASTM D1414 and ASTM 395 Method B, AS568-214 size O-rings, Times and Temperatures as noted	
% Permanent Set, 70 hours at 200°C	22.6
% Permanent Set, 70 hours at 250°C	27.4
% Permanent Set, 70 hours at 275°C	18.1
% Permanent Set, 504 hours at 275°C	35
Water Bomb Immersion, ASTM D471, 70 hrs. at 200°C	
% Volume change	+2.8
Plasma Resistance Tests, ULVAC RBH-3030 test machine, 1500W plasma energy, 6 hours exposure, 0.1 Torr vacuum pressure, gases as noted	
Oxygen, % weight loss	3.1
Carbon tetrafluoride, % weight loss	5.2
Argon, % weight loss	2.1

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.

[www.fst.com](http://www.fst.com)