SIMRIZ® 498 HIGH-TEMPERATURE FFKM

Simriz 498 compound is formulated to far exceed the requirements of AMS7257, resisting high temperatures up to 325 °C and a broad range of harsh chemical environments including:

- Strong inorganic and organic acids
- Steam and water
- MIL-PRF-23699 HTS turbine lubricants after these lubricants start to degrade

Simriz 498 resists splitting at high squeeze under high temperatures where most competitive products rupture in these conditions.

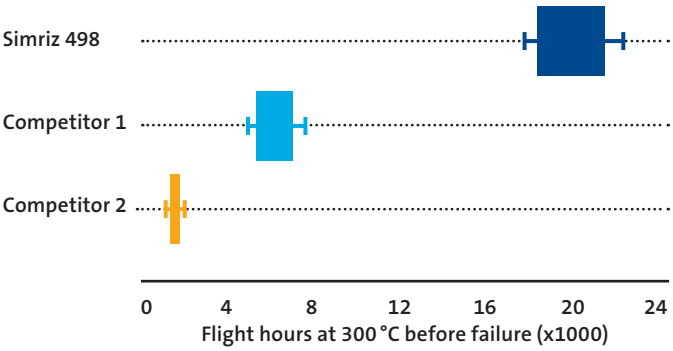
Simriz 498 success standards include:

- Extensive testing beyond the requirements of AMS7257
- Out-performs competitive materials in O-ring compressive stress relaxation compared to all competitive materials based on customer testing
- Extensive flight testing in high temperature aerospace applications

VALUES FOR THE CUSTOMER

- Demonstrated performance advantages compared to competitive products, including extensive flight testing
- Produced in first NADCAP certified production facility, and NADCAP certification has never been lost as has been the case with some competitors
- Demonstrated performance in several customer applications

O-ring life: Flight hours at 300°C (continuous)



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FEATURES AND BENEFITS

Material Properties: Simriz® 498 (FFKM)
Temperature Range: –5 °C to +320 °C

Original Properties	AMS 7257	Simriz 498
Hardness, Shore A, ASTM D2240	70 to 80	78
Tensile Strength, psi, ASTM D1414	1500 min.	2650
Ultimate Elongation, %, ASTM D1414	120 min.	161
AMS-3021 Fluid Immersion, ASTM D471 and ASTM D1414, 70 hrs. at 175 °C		
Hardness change, Shore A, ASTM D2240	± 5	0
% Tensile Strength change, ASTM D1414	–10 max.	–9
% Elongation change, ASTM D1414	–15 max.	–7
% Volume change, ASTM D471	0 to +5	+1.0
AS1241 Type IV fluid immersion, ASTM D471 and ASTM D1414, 70 hrs. at 125 °C		
Hardness change, Shore A, ASTM D2240	–15 to 0	–1
% Tensile Strength change, ASTM D1414	–40 max.	–12
% Elongation change, ASTM D1414	–15 max.	+2
% Volume change, ASTM D471	0 to +15	+2.9
ASTM Reference Fuel B Immersion, ASTM D471 and ASTM D1414, 70 hrs. at 23 °C		
Hardness change, Shore A, ASTM D2240	±5	–1
% Tensile Strength change, ASTM D1414	–20 max.	–13
% Elongation change, ASTM D1414	–15 max.	+2
% Volume change, ASTM D471	0 to +5	+0.4
Air Oven Aging, ASTM D573 and ASTM D1414, 70 hrs. at 290 °C		
Hardness change, Shore A, ASTM D2240	±5	0
% Tensile Strength change, ASTM D1414	–20 max.	–13 max.
% Elongation change, ASTM D1414	–5 max.	+2
% Weight change, ASTM D297	–5 max.	–0.5
Compression Set, ASTM D395 Method B and ASTM D1414 70 hrs. at 230 °C		
% Permanent set	40 max.	19.5
Low Temperature Retraction, ASTM D-1329		
TR-10, degrees C	+5 max.	0
Compression Set, ASTM D395 Method B and ASTM D1414 70 hrs. at 315 °C, 25% squeeze [Special Testing, not part of AMS 7257C]		
% Permanent Set		40
Cracking or rupture		none

NOTE: All testing done on AS568-214 size O-rings. Simriz 498 offers outstanding chemical and solvent resistance including compatibility with nitric acid and amine chemicals. It also exhibits excellent heat resistance up to 320°C.

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