

PN896

Sealing solutions

evolast® N896 is a high-performance FFKM material, specifically designed to withstand a **wide operational temperature range without compromising chemical resistance**. evolast® N896 is an excellent choice for use in **aggressive chemical environments**, when thermal resistance is also required, exhibiting outstanding high temperature stability and low compression-set.

Features and benefits

evolast® N896 is recommended for extremely severe applications where difficult and costly maintenance strongly requires **short process downtimes**. It works over a broad temperature service range, going from -15°C and up to +330°C. evolast® N896 is available for production of **O-rings** (with diameters from 1 mm to 2000 mm) and every shape of **customer-designed sealing element**.

Applications

- Valves
- Pumps
- Mechanical seals
- Sprayers
- Compressors
- Reactors

Typical properties

Physical properties

	Test method	Unit	Typical value
Colour			black
Specific Gravity	ASTM D1817	g/cm ³	1,98
TR10	ASTM D1329	°C	-2
Hardness	ASTM D2240	Shore A	75

Mechanical properties

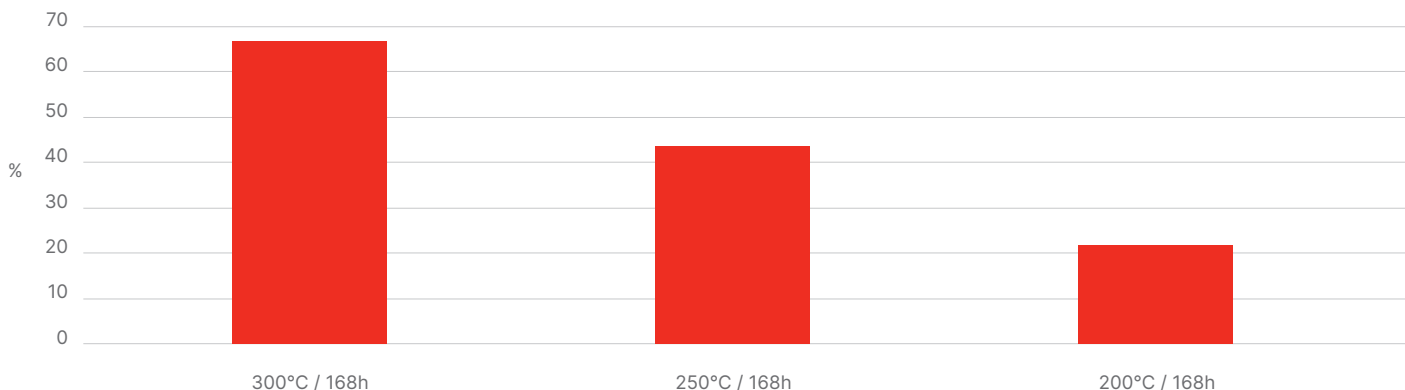
Tensile strength	ASTM D412	Mpa	18
Elongation at break	ASTM D412	%	150
Compression set (70 hours @ +200°C)	ASTM D395-B	%	22
Compression set (70 hours @ +300°C)	ASTM D395-B	%	46

Thermal resistance

Air ageing (70 hours @ +300°C)	ASTM D573		
Delta Hardness		ShA points	+2
Delta Elongation at break		%	+36
Delta Tensile strength		%	-33
Service temperature range		°C	-15 / +330

Thermal resistance

Compression Set Comparison (ISO 815-1 Meth. A)



Chemical resistance

The following tables give an indication of what evolast® N896 offers in terms of chemical resistance to aggressive chemicals: **Table 1** reports a general overview of performance in different classes of chemicals, whereas some specific examples are reported in **Table 2**. However, it is always recommended to run immersion testing in the actual operating conditions.

Table 1: Chemical resistance overview

Rating system: A: 0-10% volume swell B: 10-30% volume swell C: 30-50% volume swell

Chemical resistance (ASTM D471)	Volume swell	Chemical resistance (ASTM D471)	Volume swell
Inorganic acids	A	Esters	A
Organic acids	A	Ethers	A
Alkalis	A	Aldehydes	A
Amines (RT-Room temperature)	A	Alcohols	A
Hot amines (>70°C)	B/C	Hydrocarbons	A
Water/Steam	A	Sour gas	A
Ketones	A	Lubricants	A

Table 2: Results of lab testing of evolast® N896 in various fluids

Chemical resistance (ASTM D471)	Testing conditions (time and temperature)	Volume swell (%)	Delta hardness (ShA points)
Methyldiethanolamine	168 hours @ +100°C	+6	-3
Water/Glycol (50/50 w/w)	168 hours @ +150°C	+2	-2
Steam	168 hours @ +200°C	+6	-5
MEK	720 hours @ +45°C	+6	-4
Mobil Pegasus 1005	504 hours @ +230°C	+1	-1
HNO ₃ 65%	168 hours @ +23°C	+1	+3
Acetone	168 hours @ +23°C	+3	0

Statements and recommendations in this publication are based on our experience and knowledge of typical applications of this product, and shall not constitute a guarantee of performance nor modify or alter our standard warranty applicable to such product.