evolast®

High performance Perfluoroelastomers

PN794

Sealing solutions

evolast® N794 is a high-performance FFKM black material, specifically designed for **pharmaceutical and food handling applications**, where FDA compliancy is needed together with other regulatory requirements.
Pharmaceutical, Food and Beverage industries frequently use Automated CIP (Cleaning In Place) and SIP (Sterilization In Place) processes thus resulting in resource-saving benefits, uptime, as well as lower usage of chemicals and the prevention of toxic contamination and the minimization of recontamination. The latter two are necessary to ensure safe and compliant processing. Therefore combining the right seal material to the application can result into a prolonged seal life.

Features and benefits

evolast® N794 boasts an **excellent high temperature stability** as well as a **broad chemical resistance** and an **excellent compression-set resistance**.
This material counts on the following qualifications:

- FDA 21 CFR 177.2600
- FDA 21 CFR 177.2400
- 3A-Sanitary Standard
- USP Class VI

evolast® N794 is available for production of **O-rings** (with diameters from 1 mm to 2000mm) 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**
Color			black
Specific Gravity	ASTM D1817	g/cm^3	2,00
Hardness	ASTM D2240	Shore A	70
Mechanical properties			
Compression set (70 hours @ +200°C)	ASTM D395-B	%	18
Elongation at break	ASTM D412	%	170
Tensile strength	ASTM D412	MPa	18
TR10	ASTM D1329	°C	-4
Thermal properties			
Air ageing (70 hours @ +250°C)	ASTM D573		
Delta Hardness		ShA points	-1,0
Delta Tensile strength		%	-25
Delta Elongation at break		%	+25
Service temperature range		°C	-25 / +270

Chemical resistance

evolast® FFKM materials combine elastomeric properties with almost universal chemical compatibility. The following table gives an overview of the chemical compatibility of evolast® N794 perfluoroelastomer parts.

Chemical resistance (ASTM D471)	**Testing conditions (time and temperature)**	**Volume swell (%)**	**Delta hardness (ShA points)**
H_2SO_4 (98%)	70 hours @ +60°C	+3	-1
NaOH	72 hours @ +150°C	+1	0
Anhydrous NH_3	500 hours @ +100°C	-1	+6
Water/Glycol (50/50 w/w)	168 hours @ +150°C	+2	-2
MEK	720 hours @ +45°C	+4	-2

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