



PB794

Sealing solutions

evolast® B794 is a high-performance FFKM white 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® B794 is an excellent choice for use in **aggressive environments** where acids, bases, steam, polar solvents, organic and inorganic media are used. Together with a **broad chemical resistance** and an **excellent compression set**, evolast® B794 parts can be used in a **temperature range** going from **-20°C to +230°C**, withstanding peaks up to +270°C. This material counts on the following qualifications:

- FDA 21 CFR 177.2400, CFR 177.2600
- USP Class VI
- 3A-Sanitary Standard
- Reg. CE 1935/2004 DM 21/03/1973
- BfR XXI

evolast® B794 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
- Biomedical equipment
- Food equipment
- Fermenters

Typical properties

Physical properties

	Test method	Unit	Typical value
Color			white
Specific Gravity	ASTM D1817	g/cm ³	2,41
Hardness	ASTM D2240	Shore A	70

Mechanical properties

Compression set (70 hours @ +200°C)	ASTM D395-B	%	24
Elongation at break	ASTM D412	%	130
Tensile strength	ASTM D412	MPa	13
TR10	ASTM D1329	°C	-2

Thermal properties

Air ageing (70 hours @ +250°C)	ASTM D573		
Delta Hardness		ShA points	-1,5
Delta Elongation at break		%	+15
Delta Tensile strength		%	+5
Service temperature range		°C	-20 / +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® B794 perfluoroelastomer parts.

Chemical resistance	Testing conditions (time and temperature)	Volume swell (%)	Delta hardness (ShA points)
NaOH	100 hours @ +72°C	+5	-4
Anhydrous NH ₃	168 hours @ +45°C	-2	+8
Acetone	168 hours @ +23°C	+4	-2
MIBK	168 hours @ +115°C	+6	-3
Water	168 hours @ +150°C	+2	-2



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