



**Certain already today.
Certain also tomorrow.**

BF 750 – the solution not only for biogenic media

Certain is: The future is variable. And therefore also the conditions. What applies today can already be quite different tomorrow. As the discussion about the development of new fuels showed: nothing is so uncertain as the future. But in order to still provide a sense of certainty for you and your customers, it is important to use materials that also satisfy the high and changed demands of tomorrow.

That is why COG developed the new FPM/FKM material BF 750, which fulfils tomorrow's requirements already today. Design engineers and users have extreme difficulties in some cases with elastomer sealing materials if these come into permanent contact with biogenic media. Biogenic media include, e.g. ethanol, ethanol-carburettorfuel mixtures, rape methyl ester (RME, biodiesel), RME diesel mixtures, and pure vegetable oils. This material is, of course, **also resistant to all conventional fuels and many other media.** A truly universal, all-round sealing material and available at reasonable terms.

Benefits of BF 750

- **Universal all-rounder**
- **Excellent properties in use with biogenic and conventional fuels**
- **Outstanding resistance to chemicals**
- **Good solvent resistance**
- **Very good steam resistance**
- **Low compression set**
- **High mechanical properties**
- **Broad operating temperature range from -15 °C to +200 °C**
- **Attractive price**



When it matters ...

**Premium quality
since 1867**

High expectations still exceeded.

The material BF 750 is a highly fluorinic polymer of the 3rd generation on the basis of fluororubber (FPM/FKM). This new material was developed by the COG mixture development department especially for the high requirements specified for O-ring seals in use with biogenic media and was tested in an **independent laboratory**. The result exceeded all expectations because practically no material changes occurred in normal use. The tests were therefore extended to include unusual extreme situations. And here too, the **BF 750 material convinced** everyone with results that lie far below every tolerance limit, as proved by the following data.



Convincing values

COG-number	BF 750
Base elastomer	fluororubber (FPM/FKM)
Colour	black
Operating temperature	from -15 °C to +200 °C

Rubber technology values

Property	Unit	Value	Test method
Hardness	Shore A	75 ± 5	DIN 53 505
	°IRHD, CM	75 +3/-8	ISO 48
Tension value at 100	MPa	10,8	DIN 53 504
Tensile strength	MPa	22,6	DIN 53 504
Elongation at break	%	172	DIN 53 504
Tear strength	kN/m	12,3	ISO 34-1,B
Compression set (22 h / 200 °C)	%	< 20	DIN ISO 815

Following storage for 72 h / 23 °C

Medium		B100	B5	E85	Vegetable Oil	Ethanol	Fuel C
Change in hardness	Pt.	0	0	-1	0	-1	-1
Change in tensile strength	%	0	0	0	0	0	0
Change in strain	%	0	0	0	0	0	0
Change in weight	%	0,0	0,0	+0,3	0,0	+0,2	+0,1
Change in volume	%	0,0	0,0	+0,7	0,0	+0,5	+0,1

Following storage for 72 h / 70 °C

Medium		B100	B5	E85	Vegetable Oil	Ethanol	Fuel C
Change in hardness	Pt.	-1	-2	-7	0	-5	-5
Change in tensile strength	%	-11	-10	-20	-5	-19	-17
Change in strain	%	-6	-8	-9	-3	-10	-9
Change in weight	%	+0,5	+0,4	+3,1	+0,1	+2,2	+1,9
Change in volume	%	+0,8	+0,9	+7,3	+0,1	+5,5	+5,3





Versatility as best basic requirement.

A versatile sealing material is like a good insurance policy. This is because many of the O-rings that are used must, as a result of interactions, meet different requirements. The material BF 750 can be used wherever the sealing materials come into contact with the (new) biogenic media. These include pipes, cables, valves, filling station fuel dispensers and their peripheral equipment, pumps, motors, clutches, vacuum pumps, as well as facilities in the lacquer industry, oil industry (e.g. drill rod seal), boilers, autoclaves, hose seals, etc. The operational areas are extremely versatile.

Applications / operational areas

In addition to the biogenic fuels, this material is also highly suitable for use with conventional fuels (carburettor fuels, diesel). Further operational areas are the chemical industry, mechanical engineering, and process engineering – in short, all operational areas in which high chemical resistance is required in addition to high thermal resistance.

Properties of fluororubber (FPM/FKM)

Outstanding resistance to mineral oils, aliphatic and aromatic hydrocarbons, as well as CHCs, concentrated and diluted acids, also weak alkalis. Excellent temperature resistance up to 200 °C and high mechanical values, including outstanding ageing resistance, rank this FPM/FKM-rubber much higher than the conventional synthetic rubbers.

The values stated here do not replace the official data sheet. They are not binding and exclude any form of liability for any kind of damage.



The outstanding resistance to chemicals, steam, and solvents, combined with a low compression set and high mechanical properties make this sealing material unique in the market segment for the operating temperature range from -15 °C to +200 °C. BF 750 – a universal material that truly deserves the all-rounder title.



FOR THE BENEFIT OF OUR CLIENTS

C. Otto Gehrckens - abbreviated COG - has offered its client uncompromising premium quality for 140 years. Tradition and innovation are a single potent entity at COG and the key to success. This is demonstrated daily in our customer relations. Our clients are the among the best in their respective industries. And they expect the best from us.

Over 185 employees are committed at COG to our clients' success, ranging from engineers in the application technology department to our colleagues in Europe's largest O-ring warehouse with their rapid response capabilities. As an independent manufacturer based in Pinneberg near Hamburg, managed by the fifth generation of the founding family, we are a leading supplier of precision O-rings thanks to our comprehensive stock, flexible production facilities and customer service commitment.

Our clients define the aims of everything we do. New ideas and products are developed quickly and in a market- and goal-oriented manner in close cooperation with Application Technology and Sales. The result is often a major market benefit to our clients. Please refer to www.cog.de or contact us directly for more information. Let's discuss your aims.

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