



Extreme media. Absolutely safe.

HF 875 – the seal for extraordinary applications

Developers, designers and users often have difficulties when a technical installation or machine comes into contact with particularly aggressive media. With the more sensitive components, for example elastomer seals, this then often leads to damage. The consequences are shorter maintenance intervals, unplanned machine stoppages and, in the worst possible case, also leaks which in turn can lead to stoppage of production.

The newly developed FPM/FKM material HF 875 from COG is designed for use in aggressive media and has excellent resistance to chemicals. Here the compound HF 875 has undergone extensive testing in particularly problematic and aggressive media. The test results are consistently impressive and this FPM/FKM material can therefore be used for a number of different industrial applications.

Advantages of HF 875:

- **Universally usable all-rounder**
- **Excellent resistance to chemicals**
- **In some areas comparable with FFPM/FFKM**
- **Very good resistance to vapour**
- **Good solvent resistance**
- **Low compression set**
- **Good mechanical properties**
- **Wide temperature operating range from -15 °C to +200 °C**
- **Very attractive price, especially in comparison with FFPM/FFKM**



When it matters ...

Premium quality
since 1867

HF 875 – safety even in demanding environments

The material HF 875 is a polymer with a high fluorine content based on fluoro rubber (FPM/FKM). This new material has been designed by the COG compounding department especially for the high demands made on O-ring seals when they come into contact with aggressive media and it has been tested in an independent laboratory. The result is entirely impressive: even in the media tested as an extreme example such as nitric acid and sodium hydroxide, the material changes are slight and are within all tolerance levels – therefore providing the ideal requirements for safe sealing results.

Data sheet

COG no.	HF 875
Basic elastomer	Fluoro rubber (FPM/FKM)
Colour	Grey-brown (approximately RAL 8019)
Operating temperature	From -15°C to +200°C
Certificates/approvals	

Rubber technology data

Properties	Unit	Value	Test method
Hardness	Shore A	75 ± 5	DIN 53 505
	°IRHD, CM	75 +3/-8	ISO 48
Tension at 100 %	MPa	6	DIN 53 504
Tear resistance	MPa	15	DIN 53 504
Ultimate elongation	%	180	DIN 53 504
Tear growth resistance	kN/m	10	ISO 34-1,B
Compression set (22 h / 200 °C)	%	25	DIN ISO 815

Change after ageing in	Hardness	Tear resistance	Elongation	Volume
Water (H ₂ O) at 70 h/95°C	-3 points	-10 %	+1 %	+0,3 %
Nitric acid (HNO ₃ – 60%) at 70 h/80 °C	-10 points	-37 %	+5 %	+7,0 %
Sodium hydroxide (NaOH – 20%) at 70 h/80 °C	-2 points	-16,1 %	-3,4 %	-0,2 %

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

Properties of fluoro rubber (FPM/FKM)

FPM/FKM is extremely resistant to the effects of mineral oils, aliphatic and aromatic hydrocarbons as well as CHCs, concentrated and diluted acids and weak alkalis. Excellent temperature resistance up to + 200 °C as well as good mechanical properties and excellent ageing resistance put FPM/FKM rubber well above standard synthetic rubbers.






Wide range of uses

A sealing material with many different uses makes things a lot easier in practice. The seals which are used must fulfil a wide range of different requirements. This gives the users the security they require. The material HF 875 can be used wherever the sealing materials come into contact with aggressive media, e.g. acids or alkalis. These include pipes, lines, valves, pumps, motors, couplings and vacuum pumps as well as equipment in the paint industry, oil industry (e. g. drill pipe sealing), boilers, autoclaves, tube seals etc. HF 875 covers many different areas of application.

Even when used with fuels (gasifier fuels, diesel) this FPM/FKM compound is extremely well suited. The areas of application range from the chemical industry and mechanical engineering on to process engineering – in short all areas of application where, as well as high thermal resistance, high chemical resistance is also required.

The wide range of uses can also be seen with the available O-ring dimensions: with the currently available tools more than 14,000 different sizes can be produced with an interior diameter of 0.74 to 1,400mm and a cord thickness of 0.74 to 25 mm.





For the benefit of our customers

C. Otto Gehrckens – abbreviated COG – has offered its clients 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 among the best in their respective industries. And they expect the best from us.

The more than 185 employees at COG – ranging from engineers in the Application Technology department to our colleagues in Europe's largest O-ring warehouse with their rapid response capabilities – are committed to our customers' success. 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.

In close cooperation with Application Technology and Sales we develop new ideas and products quickly and in a market- and goal-oriented manner. The result is often a major market benefit for our customers.

Please
refer to
www.COG.de
for more
information.

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