



AFLAS® FFKMs

Elastomers for Exceptional Performance in the Most Challenging Conditions

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AGC's AFLAS® FFKM grades are perfluorinated elastomers capable of withstanding very high service temperatures. Being fully fluorinated, FFKMs exhibit the ultimate in sealing performance in all manner of aggressive chemical environments. AGC Chemicals embraces future challenges and continuously develops materials for ever-evolving applications and markets.

With their outstanding chemical performance and high temperature capabilities, AFLAS® FFKMs are perfectly suited for use in o-rings and seals in the harshest conditions.

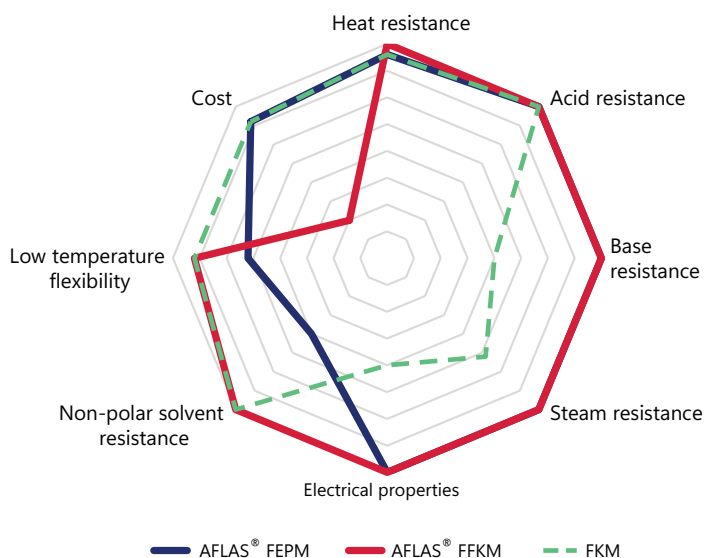
Features

- ◊ Chemical resistance
- ◊ High continuous operating temperature
- ◊ Low compression set
- ◊ Plasma compression set
- ◊ Mechanical performance at high temperatures

Benefits

- ◊ Long life in aggressive chemical environments
- ◊ Peace of mind at high temperatures
- ◊ Compressed parts last longer between replacements
- ◊ Low particle generation hence less contamination in process
- ◊ Maximum capability in static and dynamic applications

Comparison of Fluoroelastomer Performance



AFLAS® FFKMs Are Going Surfactant Free!

As part of our commitment to push technology forwards in a sustainable manner, by the end of 2027, all of AGC's FFKM grades will be available in surfactant-free versions – not just free from fluorosurfactant, but free from any surfactant.

All current "PM" grades have an equivalent "SF" counterpart, e.g. the surfactant-free version of PM-5000 will be called SF-5000. These are currently available for trial on a semi-commercial basis.

AFLAS® FFKM Grade Range

AGC has developed a range of different AFLAS® FFKM products for various applications depending on the service conditions or other specific needs.

PM-1100: the introduction to FFKM When FEPM and FKM-type elastomers don't meet your requirements, this is the next level in terms of chemical performance.

PM-1200: the one that likes the cold with a Tg of -9°C and lower viscosity for easier processing.

PM-3000: the capable all-rounder is the next level up from PM-1100 with a continuous service temperature of 250°C plus improved compression set for reduced maintenance needs.

PM-3500: the pure one, for demanding applications specifically developed for applications where high-purity is vital to the customers' processes. Shore A hardness of 70 is achievable without the need for fillers.

PM-5000: the ap-peel-ing one utilising a nitrile cure system, will run at 300°C continuously. It has been developed with improved cold compression set and low sticking force.

PM-5500: the high temperature one also utilising a nitrile cure system, and capable of continuous operation at 300°C. Shore A hardness of 68 can be achieved without fillers, making it ideal where plasma resistance is required at very high temperatures.

Grade	Service Temp. (°C)	Compress Set* (%)	Storage Modulus (kPa)	Peroxide	Nitrile	Chemical Ind.	Oil and Gas	Semiconductor	Plasma	Comments
PM-1100	230	18.1	480	●		●	●			Peak temperature 250°C
PM-1200	200	16	170	●		●	●			Low viscosity, low Tg of -9°C
PM-3000	250	14.3	480	●		●	●	●		Versatile, good compression set
PM-3500	250	22	450 - 820	●				●	●	High hardness with no filler
PM-5000	300	12 [†]	200 - 500		●			●	●	Low sticking force, improved cool CS
PM-5500	300	11 [†]	250 - 550		●	●	●	●	●	High hardness with no filler
CP-4010	270	44 [‡]	480 - 750	●				●	●	Translucent pre-compound
CP-7000	320	42 [#]	300 - 850		●	●	●	●	●	High-temperature pre-compound

* Compression Set data measured on JIS-B 2401, P-26 O-ring, 25% compression, 70h, 200°C

† Compression Set data measured on JIS-B 2401, P-26 O-ring, 25% compression, 70h, 250°C

‡ Compression Set data measured on JIS-B 2401, P-25 O-ring, 25% compression, 168h, 250°C

Compression Set data measured on JIS-B-2401, P-26 O-ring, 25% compression, 70h, 300°C

Our R&D team is constantly looking at ways to improve our offering in order to push the boundaries of possibility. If you have any specific requirements or ideas you would like to discuss, please get in touch.

The AGC logo is displayed in white text on a dark blue background. The letters 'AGC' are bold and sans-serif.

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