



The material properties of perfluoroelastomer (FFKM)

In this latest article, [TRP Polymer Solutions](#) discusses the material properties of perfluoroelastomer (FFKM). Here, we compare the properties of **Perfluoroelastomer vs Fluoroelastomer**, as well as highlighting our own range of TRPlast **Perfluoroelastomer O-rings**.

Perfluoroelastomer (FFKM) vs Fluoroelastomer (FKM)

Perfluoroelastomer (FFKM) is rapidly becoming the elastomer material of choice for demanding applications, such as in the Oil and Gas, and Chemical Processing industries. While the relative high cost of these high performance materials may be a hindrance for some applications, FFKM is often selected because it succeeds where other materials have failed. Furthermore, the costs associated with FFKM are more often than not offset by the expected benefits of the final product.

Perfluoroelastomer's material properties offer the following advantages:

- High stability in extreme media.
- Highly stable in polar and non-polar media.
- High reliability for dynamic applications.
- High reliability for static applications.
- Temperature range from -30 °C to +325 °C.
- Commonly used in O-rings and gaskets.
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Fluoroelastomers, or FKM, also operate efficiently under severe chemical conditions and at temperature extremes that are well beyond the capacity of many other seal materials. According to grade, they are well adapted for use in extreme conditions, such as those involving petroleum fuels and mineral-based hydraulic fluids, as well as many solvents. FKM exhibits poor low temperature flexibility and inferior resistance to hot water and steam.

The advantages of Fluoroelastomer include:

- Excellent chemical resistance.
- Excellent heat resistance.
- Good mechanical properties.
- Good compression set resistance.
- Resistance to wide range of oils and solvents.



Perfluoroelastomer O-rings from TRP Polymer Solutions

Perfluoroelastomer's chemical resistance and favourable thermal properties – as well as its sealing force, resistance and recovery characteristics – make Perfluoroelastomer (FFKM) the ideal choice for O-rings and gaskets in extreme applications.

TRP Polymer Solutions' range of Perfluoroelastomer O-rings deliver the highest standards of reliability and repeatability of performance. As such, our unique [TRPlast range](#) of Perfluoroelastomers (FFKM) guarantees the highest levels of performance.

For more information about our entire range of elastomer O-rings, please [contact us](#) today by calling out expert team of advisers on **01432 268899**.