

Petroz™ Perfluoroelastomer (FFKM):



Excels in High Pressure, Hostile Chemical Environments -30°C (-22°F) Up to 300°C (572°F)

Material & Design Solutions' (MDS) Petroz™ perfluoroelastomer (FFKM) is a superior choice for sealing in the most challenging environments. Effective at temperatures -30°C (-22°F) up to 300°C (572°F), Petroz compounds have a broad chemical resistance in aggressive chemical environments such as H₂S, amine-based (high pH) corrosion inhibitors, organic solvents, and strong acids. These compounds also offer a significantly lower compression set compared to competitive products providing longevity and a more effective sealing solution.

Petroz FFKM compounds are designed to operate and excel in high temperature, high pressure, and hostile chemical environments. In addition, Petroz 595 and Petroz 530LT have superior rapid gas decompression (RGD) resistance and have demonstrated excellent RGD resistance in laboratory (ISO 23936-2 and NORSOK M-170) testing.

Petroz compounds are totally fluorinated and offer the ultimate chemical resistance required in downhole applications as well as in mechanical seals, pumps, and valves in a variety of industries.

Petroz Finished Parts & Typical Applications

MDS offers Petroz FFKM in the form of molded finished products for critical service applications. Typical applications include:

- ✓ O-Rings
- ✓ V-Rings
- ✓ Gaskets
- ✓ T-Rings
- ✓ X-Rings
- ✓ Custom molded products

Petroz FFKM Chemical Compatibility & Characteristics

Abrasion resistance:	Excellent	Ozone resistance:	Excellent
Acid resistance:	Excellent	Weather resistance:	Excellent
Chemical resistance:	Excellent	Water steam resistance:	Excellent
Heat resistance:	Excellent	Flame resistance:	Good
Electrical properties:	Excellent	Impermeability:	Good
Oil resistance:	Excellent	Cold Resistance:	Fair

Petroz 530LT (Low Temperature Sealing)

A 90A durometer FFKM designed for low-temperature performance and reliable RGD resistance, with excellent compression set and high elongation.

Petroz 881 (Steam Resistance)

An 80A durometer FFKM engineered for superior steam resistance and thermal stability, ideal for aggressive chemical and high-temperature environments.

Petroz 390 (Low Compression Set)

A 90A durometer FFKM with unsurpassed compression set properties while maintaining excellent chemical resistance.

Petroz 595 (Best-in-Class RGD Resistance)

A 95A durometer FFKM specifically compounded for rapid gas decompression (RGD) resistance that consistently outperforms competitors' RGD compounds.

Petroz FFKM Typical Properties

Below is a chart outlining the typical properties of Petroz FFKM. Please keep in mind that these typical values are not intended for specification purposes. If minimum certifiable properties are required please see your local Material & Design Solutions representative.

Property	Units	Test Method	Petroz 390	Petroz 595	Petroz 530LT	Petroz 881
Hardness, Shore A	-	ASTM D2240	90	95	90	80
Tensile Strength @ Break	psi (MPA)	ASTM D412	4000 (27)	3000 (20)	1936	181
Tensile Elongation @ Break	%	ASTM D412	100	75	200	113
Tensile Modulus @ 50% Elongation	psi (MPA)	ASTM D412	1300 (9)	2500 (17)	651	508
Specific Gravity	-	ASTM D792	1.99	1.95	1.93	1.97
Compression Set: 70 hrs @ 392°F (200°C)	%	ASTM D395	10	20	12	35

*These typical values are not intended for specification purposes.