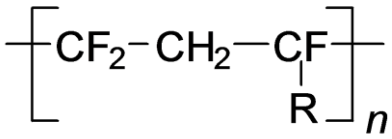
systemseals

MATERIAL SPECIFICATION SHEET

MF100

Fluorine Elastomer with PTFE (FKM)



SPECIFICATIONS

Property	Spec	Value
Hardness A Hardness D	ASTM D2240	70A ±5 -
Density	ASTM D297	2.14 ± 0.03 g/cm³
Tensile Strength	ASTM D412-624	>12.0 N/mm²
Ultimate Elongation	ASTM D412-624	245%
20% Modulus 100% Modulus 300% Modulus	ASTM D412-624	- - -
Tearing	ASTM D412-624	>30 N/mm
Compression Set 150C; 24hrs	ASTM D395/B	<20%
Min Service Temp		-30° C -22° F
Max Service Temp		220° C 428° F
Color		Brown
Aging in Air: 70hrs@250C Hardness Tensile Strength Elongation Volume	ASTM D-573	After Test +2 pts +3% -10% -
Aging in ASTM Oil3:70hrs@150C Hardness Tensile Strength Elongation Volume	ASTM D-471	After Test -1 pts -12% -12% +2.8%
Aging in Fuel C:70hrs @23C Hardness Tensile Strength Elongation Volume	ASTM D-471	After Test -4 pts -19% -20% +4.6%

FKM compound according to ASTM D2000
M6 HK710 A1-10 B31 B38 EF31 F15

DESCRIPTION

MF100 is a FKM material with hardness 70A and is a specially made compound of FKM and PTFE. FKM typically has 65 to 70% fluorine content. There are five types of FKM, and they are differentiated either by trade names or specific end-use characteristics. The higher the fluorine content, the better fluid resistance they have. On the downside, higher fluorine content can reduce physical properties of an elastomer in regards to being prone to compression set or extrusion problems. In general FKM has good resistance to mineral oils, greases and some phosphate esters (HFD), silicon oils or grease, chlorinated solvents, air, ozone and fuels. The general grade FKM is not recommended for steam and hot water that is above 100°C, phosphate esters polar solvents, fuels containing methanol, gear lubricants with EP additives, engine oils with amine additives, amines, alkalis, organic acids, and brake fluids. For special applications including the above incompatible environments, specialty types of FKM are available and need to be prudently selected. FKM can be molded by compression, transfer and injection molding processes. FKM can be a cost-effective material when its expected life time exceeds that which many other elastomers can provide.