



## Fluorine Elastomer (FKM)

### SPECIFICATIONS

Property	Spec	Value
Hardness A	ASTM D 2240	80A ±5
Density	ASTM 1817	2.00 ±0.03 G/CM <sup>3</sup>
Tensile Strength	ASTM D412-624	>12.0 N/MM <sup>2</sup>
Ultimate Elongation	ASTM D412-624	160%
20% Modulus	ASTM D412-624	-
100% Modulus	ASTM D412-624	-
300% Modulus	ASTM D412-624	-
Tearing	ASTM D412-624	>29 N/mm
Compression Set 150C; 24hrs	ASTM D395	<21%
Min Service Temp		-20° C -4° F
Max Service Temp		220° C 428° F
Max Service Temp- Water/Gycol	-	-
Color		Black

### DESCRIPTION

MF110 is a FKM material with hardness 80A and is a specially made compound for standard applications. 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 trade names\* are Viton™, Technoflon, Dyneon fluoroelastomer and Dai-el. 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 like Skydrol, 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.