



Marco Compound # V1189

90 Durometer, Black, GF Type FKM

Technical Datasheet

Common Names:

FKM, Fluoropolymer, Fluorel®, Viton®,

General Description:

FKM compounds are widely used in chemical, automotive, aerospace and industrial applications. These compounds offer excellent chemical and temperature resistance. There are many additional specialty compounds based on A, B, F, GLT, GFLT, LTFE and ETP polymer types. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, chemicals, or physical properties is required.

Features:

- High temperature resistance.
- Excellent resistance to acids, fuels, mineral oils, greases, aliphatic, aromatic and chlorinated hydrocarbons, non-flammable hydraulic fluids (HFD) and many organic solvents and chemicals.
- Excellent resistance to aging and ozone.
- Low gas permeability, low compression set.

Limitations:

- Steam, hot water, amines, polar solvents, low molecular weight organic solvents and glycol-based brake fluids.

Cure System:

Peroxide

Service Temperature:

-13°C to +204°C (8° to 400° F)

PHYSICAL PROPERTIES

ORIGINAL PROPERTIES	Typical Test Results
Hardness, Shore A	92
Color	Black
Tensile Strength, MPa (psi)	18.1 (2631)
Modulus @ 100% Elongation, MPa (psi)	14.0 (2030)
Ultimate Elongation, %	141
Specific Gravity	1.90
Brittleness Temperature, °C	-13

HEAT AGING – (70 hrs. @ 250°C)	Typical Test Results
Hardness Change, Shore A	+1
Tensile Strength Change, %	-5.8
Ultimate Elongation Change, %	+2.1

HEAT AGING – (70 hrs. @ 275°C)	Typical Test Results
Hardness Change, Shore A	+1
Tensile Strength Change, %	-11.6
Ultimate Elongation Change, %	+17.7

COMPRESSION SET - % Permanent set	Typical Test Results
22 hrs @ 23°C	19.6
22 hrs @ 175°C	18.4
22 hrs @ 200°C	15.5

IMMERSION, DISTILLED WATER– (70 Hours @ 100°C)	Typical Test Results
Hardness Change, Shore A	-2
Tensile Strength Change, %	-14.0
Ultimate Elongation Change, %	+11.3
Volume Change, %	+1.5

IMMERSION, ASTM OIL #1 (IRM 901)– (70 Hours @ 150°C)	Typical Test Results
Hardness Change, Shore A	-0
Tensile Strength Change, %	+7.9
Ultimate Elongation Change, %	+5.7
Volume Change, %	+0.4

IMMERSION, ASTM OIL #3 (IRM 903)– (70 Hours @ 150°C)	Typical Test Results
Hardness Change, Shore A	-1
Tensile Strength Change, %	-1.1
Ultimate Elongation Change, %	+12.1
Volume Change, %	+1.2

IMMERSION, FUEL C OIL– (70 Hours @ Room Temperature, 23°C)	Typical Test Results
Hardness Change, Shore A	-0
Tensile Strength Change, %	-0.5
Ultimate Elongation Change, %	+11.3
Volume Change, %	+1.2

IMMERSION, SERVICE FLUID #101 – (70 Hours @ 200° C)	Typical Test Results
Hardness Change, Shore A	-4
Tensile Strength Change, %	-14.2

This information is to the best of our knowledge accurate and reliable. However, Marco Rubber makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It's the customer's responsibility to evaluate parts prior to use.

Ultimate Elongation Change, %	+1.4
Volume Change, %	+4.4

IMMERSION, ETHANOL – (600 Hours @ Room Temperature, 23°C)	Typical Test Results
Hardness Change, Shore A	-2
Volume Change, %	+0.9

IMMERSION, ETHANOL – (70 Hours @ Room Temperature, 23°C)	Typical Test Results
Hardness Change, Shore A	-0
Volume Change, %	+0.5

IMMERSION, METHANOL – (600 Hours @ Room Temperature, 23°C)	Typical Test Results
Hardness Change, Shore A	-5
Volume Change, %	+3.5

IMMERSION, METHANOL – (70 Hours @ Room Temperature, 23°C)	Typical Test Results
Hardness Change, Shore A	-1
Volume Change, %	+1.3

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Fluorel® is a registered trademark of Dyneon.