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Marco Compound # V1037
75 Durometer, Black, Terpolymer 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. V1037 is Marco's specialty grade compound for fuels. 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:
Bisphenol

Service Temperature:
-40 to 400° F
(Additional compounds may be available with expanded temperature ranges).

Specification:
ASTM 2000 M2HK710 A1-11 B38 C12 EF31 Z1 Z2 Z3

PHYSICAL PROPERTIES

ORIGINAL PROPERTIES (710 and Z1)	ASTM D2000 Requirements	Typical Physical Properties
Hardness, Shore A, ASTM D2240 (Z1=75+/-5)	75 +/- 5	76
Color	Black	Black
Tensile Strength, psi, ASTM D412	1,450min.	2,000
Ultimate Elongation, %, ASTM D412	175 Min.	220

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AIR AGING – (Z2) ASTM D 573 (70 hrs. @ 200°C)	ASTM D2000 Requirements	Typical Physical Properties
Hardness Change, Shore A, ASTM D2240	+10 (max)	+1
Tensile Strength Change, %, ASTM D412	-20 (max)	+5
Ultimate Elongation Change, %, ASTM D412	-25 (max)	0

COMPRESSION SET – B38, ASTM D 395 Method B (22 hrs. @ 200°C)	ASTM D2000 Requirements	Typical Physical Properties
Permanent Set %	50 (max)	15

OZONE RESISTANCE – Z12, ASTM D 395	ASTM D2000 Requirements	Typical Physical Properties
Rating	No Cracks	Pass

FLUID RESISTANCE – ASTM Fuel C – EF31, ASTM D 471(70 hrs. @ 23°C)	ASTM D2000 Requirements	Typical Physical Properties
Hardness Change, Shore A, ASTM D2240	+/- 5	-2
Tensile Strength Change, %, ASTM D412	-25 (max)	-10
Ultimate Elongation Change, %, ASTM D412	-20 (max)	-10
Volume Change, %, ASTM D471	0 to + 10	+2

METHANOL IMMERSION – Z3, ASTM D471 (70 hours @ 23° C)	ASTM D2000 Requirements	Typical Physical Properties
Volume change, %	+20 (max.)	+14

UL Listed for service as follows (UL 157 JMLU2, File MH16378)
Temperature Range = -40° C to 105° C
Gasoline
Gasoline/Alcohol Blends
Naphtha or Kerosene
Manufactured gas or Natural gas
Diesel fuel, fuel oil or lubricating oil
Liquified Petroleum Gas (LP-Gas)
Suitable for gasoline alcohol blends with a full concentration range for ethanol and methanol
Suitable for 0-20% MTBE/Gasoline blends

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Fluorel® is a registered trademark of Dyneon.