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Marco Compound # V1192
FKM 80 Durometer, Black, UL Approved
Technical Datasheet

Common Names:
FKM, Fluoropolymer, Fluorel®, Viton®,

General Description:
FKM compounds are widely used in chemical, automotive, aerospace, food processing and industrial applications. These compounds offer excellent chemical and temperature resistance. Marco's V1192 is UL approved for use in gasoline, kerosene, #1 and #2 fuel oil, L-P, city and manufactured gas. 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:
- UL approved for use in gasoline, kerosene, #1 and #2 fuel oil, L-P, city and manufactured gas
- 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:
- Polar solvents, low molecular weight organic solvents and glycol-based brake fluids.

Service Temperature:
-15 to 400° F
(Additional compounds may be available with expanded temperature ranges).

Specifications:
ASTM D2000 2HK 820 A1-10 B37 B38 EF31 EO87

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A, ASTM D2240	80 +/- 5	81
Color	Black	Black
Tensile Strength, MPa (psi), ASTM D412	10.0 (1,450) min.	16.9 (2458)
Ultimate Elongation, %, ASTM D412	150 Min.	260
Modulus @ 100%, psi, ASTM D412		720
Specific Gravity, g/cm^3		1.85

HEAT RESISTANCE – A1-10, ASTM D 573 (70 hrs. @ 250°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	+10 (max)	0
Tensile Strength Change, %, ASTM D412	-25 (max)	-17.5
Ultimate Elongation Change, %, ASTM D412	-25 (max)	-15.4

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HEAT RESISTANCE – A1-11, ASTM D 573 (70 hrs. @ 275°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Hardness Change, Shore A, ASTM D2240		+1
Tensile Strength Change, %, ASTM D412		-14.7
Ultimate Elongation Change, %, ASTM D412		+0

COMPRESSION SET – B38, ASTM D 395 Method B (22 hrs. @ 175°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Permanent Set, %, 22 hrs. @ 175°C	50 (max)	9.9
Permanent Set, %, 22 hrs. @ 200°C	50 (max)	11.4

FLUID RESISTANCE – Distilled Water – ASTM D 471(70 hrs. @ 100°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Hardness Change, Shore A, ASTM D2240		-3
Volume Change, %, ASTM D471		+2.8

FLUID RESISTANCE – Reference Fuel A – ASTM D 471(70 hrs. @ RT 23°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Tensile Strength Change, %, ASTM D412		-10.0
Ultimate Elongation Change, %, ASTM D412		-3.8
Hardness Change, Shore A, ASTM D2240		+0
Volume Change, %, ASTM D471		+0.2

FLUID RESISTANCE – Reference Fuel B– ASTM D 471(70 hrs. @ RT 23°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Tensile Strength Change, %, ASTM D412		-27.3
Ultimate Elongation Change, %, ASTM D412		-19.2
Hardness Change, Shore A, ASTM D2240		-1
Volume Change, %, ASTM D471		+1.5

FLUID RESISTANCE – Reference Fuel C– ASTM D 471(70 hrs. @ RT 23°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Tensile Strength Change, %, ASTM D412		-18.6
Ultimate Elongation Change, %, ASTM D412		-11.5
Hardness Change, Shore A, ASTM D2240		-3
Volume Change, %, ASTM D471		+1.5

FLUID RESISTANCE – IRM 901– ASTM D 471(70 hrs. @ 150°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Tensile Strength Change, %, ASTM D412		-11.8
Ultimate Elongation Change, %, ASTM D412		-7.7
Hardness Change, Shore A, ASTM D2240		+0
Volume Change, %, ASTM D471		+0.4

FLUID RESISTANCE – IRM 903– ASTM D 471(70 hrs. @ 150°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Tensile Strength Change, %, ASTM D412		-12.1
Ultimate Elongation Change, %, ASTM D412		-7.7
Hardness Change, Shore A, ASTM D2240		-1
Volume Change, %, ASTM D471		+1.8

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