

Marco Compound # V1073

FKM 75 Durometer, Black, FDA & 3-A Sanitary Compliant 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. V1073 is Marco's FDA compliant compound. 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:

- FDA compliant
- 3-A Sanitary standards 18-03 Class I, II, III & IV
- 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, polar solvents, low molecular weight organic solvents and glycol-based brake fluids.

Service Temperature:

-15 to 437° F

(Additional compounds may be available with expanded temperature ranges).

Specification:

ASTM D2000 2HK720 A1-10 B37 B38 EF31 EO78 F15

ASTM D2000 4HK720 A1-11 B38 EF31 EO78

ASTM D2000 6HK720 A1-10 A1-11 EF31 EO88 F15

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	Typical Test Results
Hardness, Shore A	75
Color	Black
Tensile Strength, psi	2,400
Ultimate Elongation, %	300
Specific Gravity	1.84
Brittleness Temperature	-14 F
Tear Resistance, Die B	194 ppi
Tear Resistance, Die C	167 ppi

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.

COMPRESSION SET – ASTM D 395 Method B (22 hrs. @ 175°C)	Typical Test Results
Plied: 22 hrs @ 73°F (23°C)	21%
Plied: 22 hrs @ 347°F (175°C)	13%
Plied: 22 hrs @ 392°F (200°C)	15%

HEAT AGED – 70 hrs. @ 482°F (250°C)	Typical Test Results
Hardness Change, points	0
Tensile Strength Change, %	-8
Ultimate Elongation Change, %	-6.5

HEAT AGED – 70 hrs. @ 527°F (275°C)	Typical Test Results
Hardness Change, points	0
Tensile Strength Change, %	-21.3
Ultimate Elongation Change, %	-18

FLUID RESISTANCE – ASTM Fuel A – ASTM D 471(70 hrs. @ 23°C)	Typical Test Results
Hardness Change, points	-0
Tensile Strength Change, %	-4.6
Ultimate Elongation Change, %	-2.3
Volume Change, %	0

FLUID RESISTANCE – ASTM Fuel B – ASTM D 471(70 hrs. @ 23°C)	Typical Test Results
Hardness Change, points	0
Tensile Strength Change, %	-18
Ultimate Elongation Change, %	-6
Volume Change, %	+2

FLUID RESISTANCE – ASTM Fuel C – ASTM D 471(70 hrs. @ 23°C)	Typical Test Results
Hardness Change, points	-2
Tensile Strength Change, %	-18
Ultimate Elongation Change, %	+1
Volume Change, %	+4.3

ASTM OIL #1 (IRM 901) – 70 hrs. @ 302°F (150°C)	Typical Test Results
Hardness Change, points	-0
Tensile Strength Change, %	-12.5
Ultimate Elongation Change, %	-9.6
Volume Change, %	+0.1

ASTM OIL #3 (IRM 903) – 70 hrs. @ 302°F (150°C)	Typical Test Results
Hardness Change, points	0
Tensile Strength Change, %	-12.4
Ultimate Elongation Change, %	+4.5
Volume Change, %	+1.4

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SERVICE FLUID 101 – 70 hrs. @ 392°F (200°C)	Typical Test Results
Hardness Change, points	-6
Tensile Strength Change, %	-23
Ultimate Elongation Change, %	+16
Volume Change, %	+10

STAUFFER BLEND 7700 – 70 hrs. @ 392°F (200°C)	Typical Test Results
Hardness Change, points	-11
Tensile Strength Change, %	-30
Ultimate Elongation Change, %	+5.8
Volume Change, %	+18

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Fluorel® is a registered trademark of Dyneon.