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Marco Compound # V1135

FKM 70 Durometer, Off-White, 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. V1135 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
- CFR 21 177.2600
- High temperature resistance.
- Excellent resistance to petroleum based oils and aromatic fluids; suitable for milk and edible oils
- 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).

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	Typical Test Results
Hardness, Shore A	75
Color	Off-White
Tensile Strength, psi	1,371
Ultimate Elongation, %	259
Specific Gravity grams/cc	2.16
Brittleness Temperature	7 F
Tear Resistance, Die B	204 ppi
Tear Resistance, Die C	151 ppi

COMPRESSION SET	Typical Test Results
Plied: 22 hrs @ RT 73°F (23°C)	13.5%
Plied: 22 hrs @ 347°F (175°C)	61%
Plied: 22 hrs @ 392°F (200°C)	76.5%

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HEAT AGED – 70 hrs. @ 482°F (250°C)	**Typical Test Results**
Hardness Change, points	+5
Tensile Strength Change, %	+22.9%
Ultimate Elongation Change, %	-28.2%

HEAT AGED – 70 hrs. @ 527°F (275°C)	**Typical Test Results**
Hardness Change, points	+7
Tensile Strength Change, %	-2.6%
Ultimate Elongation Change, %	+41.7%

FLUID RESISTANCE – ASTM Fuel C – (70 hrs.@ RT 73°F (23°C)	**Typical Test Results**
Hardness Change, points	0
Tensile Strength Change, %	-10.8%
Ultimate Elongation Change, %	-9.3%
Volume Change, %	+3.5%

ASTM OIL #1 (IRM 901) (70 hrs. @ 302°F (150°C)	**Typical Test Results**
Hardness Change, points	0
Tensile Strength Change, %	+5.8%
Ultimate Elongation Change, %	-10.4%
Volume Change, %	0

ASTM OIL #3 (IRM 903) (70 hrs. @ 302°F (150°C)	**Typical Test Results**
Hardness Change, points	0
Tensile Strength Change, %	+0.4%
Ultimate Elongation Change, %	-4.6%
Volume Change, %	+1.4%

SERVICE FLUID 101 – 70 hrs. @ 392°F (200°C)	**Typical Test Results**
Hardness Change, points	-5
Tensile Strength Change, %	-13.2%
Ultimate Elongation Change, %	-14.7%
Volume Change, %	+9.4%

STAUFFER BLEND 7700 – 70 hrs. @ 392°F (200°C)	**Typical Test Results**
Hardness Change, points	-7
Tensile Strength Change, %	-19%
Ultimate Elongation Change, %	-22%
Volume Change, %	+17%

DISTILLED WATER AGED – 70 hrs. @ 212°F (100°C)	**Typical Test Results**
Hardness Change, points	-4
Volume Change, %	+1.8%

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Fluorel® is a registered trademark of Dyneon.