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Marco Compound # V1184 70 Durometer, Black, GLT 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:

- Low temperature capabilities
- 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:

-40° C to +204° C (-40° to 400° F)

Specifications:

ASTM D2000 M2HK714 A1-10 B37 B38 C12 EF31 EO78

PHYSICAL PROPERTIES

| ORIGINAL PROPERTIES | Specification | Typical Test |
|---|-----------------|--------------|
| Press Cure @ 170°C X 10 Minutes, Post Cure @ 230°C X 24 Hours | Requirements | Results |
| Hardness, Shore A | 70 +/- 5 | 70 |
| Color | Black | Black |
| Tensile Strength, MPa (psi) | 14.0 (2030) min | 14.9 (2160) |
| Ultimate Elongation, % | 175 min | 247 |
| Specific Gravity | - | 1.82 |

| HEAT AGING – (70 hrs. @ 270°C) | Specification Requirements | Typical Test Results |
|--------------------------------|----------------------------|-------------------------|
| Hardness Change, Shore A | +10 max | +5 |
| Tensile Strength Change, % | -25 max | -20 |
| Ultimate Elongation Change, % | -25 max | -21 |
| Volume Change, % | | -2 |

| COMPRESSION SET – Heat Aging @ 175°C X 70 Hours | Specification Requirements | Typical Test Results |
|--|-------------------------------|-------------------------|
| % Permanent set - Heat Aging @ 175°C X 22 Hours | 50 max | 25 |
| % Permanent set - Heat Aging @ 200°C X 70 Hours | 50 max | 36 |

| FLUID RESISTANCE, NO. 101 OIL – (70 Hours @ 200°C) | Specification Requirements | Typical Test Results |
|--|----------------------------|-------------------------|
| Hardness Change, Shore A | -15 to + 5 | -6 |
| Tensile Strength Change, % | -40 max | -2 |
| Ultimate Elongation Change, % | -20 max | -5 |
| Volume Change, % | 0 to + 15 | +8 |

| FUEL C OIL IMMERSION – (70 Hours @ 23°C) | Specification Requirements | Typical Test Results |
|--|-------------------------------|-------------------------|
| Hardness Change, Shore A | +/- 5 | -2 |
| Tensile Strength Change, % | -25 max | -16 |
| Ultimate Elongation Change, % | -20 max | -5 |
| Volume Change, % | 0 to + 10 | +5 |

| FLUID RESISTANCE, NO. 2 BHEND 7700 – (70 Hours @ 200° C) | Specification Requirements | Typical Test Results |
|--|-------------------------------|-------------------------|
| Hardness Change, Shore A | | -4 |
| Tensile Strength Change, % | | -6 |
| Ultimate Elongation Change, % | | -10 |
| Volume Change, % | | -9 |

| LOW TEMPERATURE FLEXIBILITY ASTM D1329 | Specification Requirements | Typical Test Results |
|--|-------------------------------|-------------------------|
| TIME: 3 MIN AT -40° C | PASS | PASS |

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Fluorel® is a registered trademark of Dyneon.