

## Marco Compound # L1010

### 90 Durometer, Black, Explosive Decompression and Base Resistant Fluoropolymer Technical Datasheet

#### **General Description:**

Marco compound L1010 is a specially formulated 90 durometer fluoropolymer whose performance is comparable to an Aflas® FEPM with increased base resistance. This material also exhibits excellent solvent, heat and steam resistance. It provides superior performance in water, steam and virtually all caustics making it ideal for use in applications in the oil and gas exploration and extraction industry. The L1010 compound is Explosive Decompression (ED) resistant for use in high pressure and pressure cycling applications. Contact [engineering@marcorubber.com](mailto:engineering@marcorubber.com) for assistance in selecting a specialized compound when increased resistance to temperature, chemicals, or physical properties is required.

#### **Features:**

- Increased base resistance
- Explosive Decompression (ED) resistant
- Tested to NACE TM0297
- Resistant to high pressure CO<sub>2</sub> gas
- Ideal for prolonged exposure to steam
- High resistance to acids, amines, steam, brine, sour oil and gas (H<sub>2</sub>S)
- Resistant to highly reactive organic and inorganic chemicals

#### **Specification:**

ASTM D2000 M2HK910 A1-10 B38 EF31 F15

#### **Service Temperature:**

-15 to 250°C (5 to 482°F)

### TYPICAL PHYSICAL PROPERTIES

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Reports
Hardness, Shore A, ASTM D2240 (Z1=75+/-5)	90 +/- 5	91
Color	Black	Black
Tensile Strength, psi, ASTM D412	1450 (Min)	2872
Ultimate Elongation, %, ASTM D412	100 (Min)	118
Specific Gravity	Report	1.84

<b>HEAT RESISTANCE – ASTM D 573 (70 hrs. @ 250°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Hardness Change, points	+10	+5
Tensile Strength Change, %	- 25	-11
Ultimate Elongation Change, %, max.	- 25	-3
Weight Change, %	-----	-2.6

<b>COMPRESSION SET – 22 hrs. @ 200°C</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Compression Set, %	50	39.0

<b>LOW TEMPERATURE RESISTANCE – 3 min. @ -25°C</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Brittleness Test	Non-Brittle	Pass

### FLUID RESISTANCE PROPERTIES

<b>FUEL C OIL IMMERSION – 70 hrs @ 23°C</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Hardness Change, Shore A, ASTM D2240	+/- 5	-4
Tensile Strength Change, %, ASTM D1414	-25	-11
Ultimate Elongation Change, %, ASTM D1414	-20	+18
Volume Change, %, ASTM D471	0 to +10	+4.8

<b>IRM 901 OIL IMMERSION – 70 hrs @ 150°C</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Hardness Change, Shore A, ASTM D2240	-----	+1
Tensile Strength Change, %, ASTM D1414	-----	+9
Ultimate Elongation Change, %, ASTM D1414	-----	+9
Volume Change, %, ASTM D471	-----	+1.2

<b>IRM 903 OIL IMMERSION – 70 hrs @ 150°C</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Hardness Change, Shore A, ASTM D2240	-----	-1
Tensile Strength Change, %, ASTM D1414	-----	-3
Ultimate Elongation Change, %, ASTM D1414	-----	+18
Volume Change, %, ASTM D471	-----	+2.5

<b>METHANOL IMMERSION – 70 hrs @ 23°C</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Hardness Change, Shore A, ASTM D2240	-----	-3
Tensile Strength Change, %, ASTM D1414	-----	-15
Ultimate Elongation Change, %, ASTM D1414	-----	+18
Volume Change, %, ASTM D471	-----	+2.9

<b>ASTM 3 + 1% BENZYLAMIDE IMMERSION – 168 hrs @ 150°C</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Reports</b>
Hardness Change, Shore A, ASTM D2240	-----	-6
Tensile Strength Change, %, ASTM D1414	-----	-16
Ultimate Elongation Change, %, ASTM D1414	-----	+1
Volume Change, %, ASTM D471	-----	+2.6

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