

## Marco Compound # E1118

### 75 Durometer, Black, Nuclear Safe EPDM

### Technical Datasheet

#### **Common Names:**

Ethylene-Propylene (EP, EPDM)

#### **General Description:**

EPDM rubber (ethylene propylene diene monomer rubber) is an elastomer which is characterized by wide range of applications and good chemical resistance. Marco comp

#### **Features:**

- Good heat and compression resistance.
- Resistant to ketones, hot and cold water, steam, alkalis, polar solvents, ozone, sunlight, alcohols, glycol engine coolant and Skydrol (phosphate ester hydraulic fluid).

#### **Limitations:**

- Not recommended for oils, gasoline, kerosene, aromatic and aliphatic hydrocarbon, halogenated solvents, concentrated acids, non-polar solvents, petroleum oils and aromatic fuels.

#### **Cure System:**

- Peroxide

#### **Service Temperature:**

-45 to 300° F (-43 to 150° C)

#### **Specification:**

ASTM 2000 5CA710 A25 B35 EA14 F79 Z1 Z2 (Z1= Peroxide cured, Z2 = contains less than 5% plasticizers)

#### PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	75 +/- 5	79
Color	Black	Black
Tensile Strength, MPa (psi)	10.35 (1,500)	13.63 (1,977)
Ultimate Elongation, %	150	212
Specific Gravity	-----	1.26

HEAT RESISTANCE – (70 hrs. @ 125°C), ASTM D573-04	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	+10	+3
Tensile Strength Change, %, max.	-20	-8
Ultimate Elongation Change, %, max.	-40	-11
Weight Change, %		-0.5

HEAT RESISTANCE – ASTM D573-04 (70 hrs. @ 150°C)	ASTM D2000	Typical Test
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	Requirements	Results
Hardness Change, points, max.		+3
Tensile Strength Change, %, max.		-8
Ultimate Elongation Change, %, max.		-11
Weight Change, %		-0.5
150° Bend	No crack	Passed

<b>COMPRESSION SET – ASTM D395-03, Method B. (22 hrs. @ 125°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Permanent Set, %, max.	50	16

<b>WATER RESISTANCE – ASTM D471-06 (70 hrs. @ 100°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points, max.	---	+1
Tensile Strength Change, %, max.	---	+3
Ultimate Elongation Change, %, max.	---	+7
Weight Change, %	+/-5	+2

<b>LOW TEMPERATURE RESISTANCE - ASTM D2137-05, Method A</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Non-brittle after 3 min. @ -40°C	Non Brittle	Passed

<b>ELEMENT CONTENT – EN 14582 &amp; 1C</b>	<b>Requirements</b>	<b>Typical Test Results</b>
Fluorine content, ppm	200 max.	None detectable
Chlorine content, ppm	200 max.	None detectable
Bromine content, ppm	200 max.	None detectable

<b>ELEMENT CONTENT – US EPA 3052 &amp; ICP-OES</b>	<b>Requirements</b>	<b>Typical Test Results</b>
Mercury content, ppm	1 max.	None detectable
Arsenic content, ppm	2 max.	None detectable
Lead content, ppm	10 max.	None detectable
Zinc content, ppm	---	21.2

<b>ELEMENT CONTENT – US EPA 3052 &amp; EA</b>	<b>Requirements</b>	<b>Typical Test Results</b>
Sulfur content, ppm	200 max.	0.02

Date: 2016-7-1

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