Request a Quote

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Marco Compound # E1139

70 Durometer, Black, Food and Drinking Water Safe Peroxide Cured 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 compound E1139 meets a variety of specifications for use in food, beverage, and drinking water applications.

Features:
- FDA 21 CFR 177.2600 Parts A-F Compliant
- NSF-61, WRC, ACS, DVGW-KTW & DVGW-W270 Certified for Drinking Water Applications
- UL 157 Listed
- 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:
-65 to 300° F (-54 to 150° C)

Specification:
ASTM D2000 M4CA710 A25 B35 EA14 C12

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	D2000 Specification Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	74
Color	Black	Black
Tensile Strength, MPa (psi)	10.0 (1,450)	13.4 (1,943)
Ultimate Elongation, %	150	178
Modulus at 100% elongation, psi	Report	723
Specific Gravity	Report	1.144

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HEAT AGING – A25, ASTM D573 (70 hrs. @ 125°C)	**D2000 Specification Requirements**	**Typical Test Results**
Hardness Change, points, max.	10	+2
Tensile Strength Change, %, max.	-20	+12
Ultimate Elongation Change, %, max.	-40	+2
Volume Change %	-----	0

HEAT AGING – ASTM D573 (70 hrs. @ 150°C)	**D2000 Specification Requirements**	**Typical Test Results**
Hardness Change, points, max.	-----	+3
Tensile Strength Change, %, max.	-----	+8
Ultimate Elongation Change, %, max.	-----	-2
Volume Change %	-----	-0.8

COMPRESSION SET – B35, ASTM D 395 Method B (22 hrs. @ 125°C)	**D2000 Specification Requirements**	**Typical Test Results**
Permanent Set, %, Max. (Slab)	70	13

COMPRESSION SET – ASTM D 395 Method B (22 hrs. @ 150°C)	**D2000 Specification Requirements**	**Typical Test Results**
Permanent Set, %, Max. (Slab)	-----	21

COMPRESSION SET – ASTM D 395 Method B (70 hrs. @ 100°C)	**D2000 Specification Requirements**	**Typical Test Results**
Permanent Set, %, Max. (Slab)	-----	15

OZONE RESISTANCE – C12, ASTM D 1171 Method B	**D2000 Specification Requirements**	**Typical Test Results**
No Crack	Pass	Pass

FLUID RESISTENCE, Water – EA14, ASTM D 471 (70 hrs. @ 100°C)	**D2000 Specification Requirements**	**Typical Test Results**
Hardness Change, points, max.	-----	-2
Tensile Strength Change, %, max.	-----	+1
Ultimate Elongation Change, %, max.	-----	-1
Volume Change, %	+/- 5	+1.6

LOW TEMPERATURE RESISTANCE – F19, ASTM D 2137 Method A, 9.3.2 (3 min. @ -55°C)	**D2000 Specification Requirements**	**Typical Test Results**
Non-brittle	Pass	Pass

Date: 2016-5-4