



G-M-I, Inc. Product Data Sheet Rubber Polymers (Elastomers)

Compound: EPDM
Curing Agent: Peroxide

| | | |
|-----|-------------|-------------|
| No. | EX50 | EX70 |
| | X = Color* | |

Physical Properties:

| Test Method | Property | 50 Durometer | | 70 Durometer | |
|---|--|------------------|-----------|------------------|-----------|
| | | Specification | Typical | Specification | Typical |
| ASTM D-2240 | Durometer Hardness Shore A, Points | 50±5 | 50 | 70±5 | 71 |
| ASTM D-412 | Tensile Strength (Yield Stress), Min. PSI / mPa | 1015/7 | 1126/8 | 1305/9 | 1544/11 |
| ASTM D-412 | Ultimate Elongation, % Min | 350 | 503 | 225 | 494 |
| ASTM D-297 | Specific Gravity (Density), lb/ft ³ / kg/m ³ | 1.15±.03/18.5±.5 | 1.12/17.3 | 1.18±.02/19.0±.3 | 1.18/19.1 |
| ASTM D-624 | Tear Resistance Die B, Min. PPI / N/mm | 100/18 | 178/31 | 150/26 | 215/37 |
| ASTM D-395 | Compression Set, 22 hrs at 100°C, % Max. | 50 | 37 | 50 | 28 |
| ASTM D-573 | Heat Aged, 70 hrs at 100°C: Hardness Change, Pts Tensile Strength Change, % Max. Ultimate Elongation Change, % Max. | ±15 | +7 | ±15 | +5 |
| | | ±30 | +9 | ±30 | +3 |
| | | -50 | -10 | -50 | -25 |
| ASTM D-471 | Water Resistance, 70 hrs at 100°C: Hardness Chg Pts Volume Change, % Max. | ±15 | +4 | ±5 | +5 |
| | | ±15 | +4 | ±5 | +2 |
| ASTM D-412 | Modulus; | 100%, PSI/mPa | --- | --- | 302/2 |
| | | 200%, PSI/mPa | --- | --- | 485/3 |
| | | 300%, PSI/mPa | --- | --- | 774/6 |
| Temperature Range | -20/+230°F (-29/+110°C) | | | | |
| Shelf Life | Maximum Storage Life: Unlimited per SAE ARP5316 Rev C 2010-12, 20 Years per MIL-HDBK-695E 20/October/2011. | | | | |
| *Colors: A = Gray, B = Black, G = Green, K = Khaki, L = Purple, N = Brown, O = Orange, R = Red, U = Blue, W = White and Y = Yellow. | | | | | |

Applications:

EPDM has excellent aging, ozone and weather resistance. It also has excellent steam and water resistance, maintains its flexibility at low temperatures, features excellent resistance to acids, alkalis and oxygenated solvents and is very color stable. It is not recommended for resistance to gasoline, hydrocarbon solvents and oils. It is found in a very broad range of applications and is excellent for outdoor applications.

Standards/Regulations, Independently Tested and Certified Compliant:

| Standard/Regulation | Description |
|---|---|
| ISO 9001 | Quality Management System |
| US Food and Drug Administration | Title 21, Part 177, SubPart C, Sec. 177.2600, Substances for Use Only as Components of Articles Intended for Repeated Use in Food, CITE: 21CFR177.2600. |
| USDA | US FSIS (Food Safety Inspection Service) per the FDA 21CFR7.12 and 21CFR7.13 Regulations for Direct and Incidental Food Contact Materials for Intended Use as Specified in the above FDA 21CFR177.2600 Regulations. |
| 3-A Sanitary Standards | Multiple Use-Rubber and Rubber-Like Materials Used as Product Contact Surfaces in Dairy Equipment, 18-_. Authorization No.: 1294, Class II, III and IV. |
| USDA, NSF/3-A/ANSI 14159-3-2005 | Standards for the Sanitary and Hygiene Design and Fabrication of Dairy Processing Equipment. |
| EU 1935/2004(03)EC | Food Contact Regulations, excluding Organoleptic (Odor) testing. |
| US Pharmacopeia | USP Class VI, 2004; USP 27, NF 22, 2004, <88> Biological Reactivity, <i>In Vivo</i> . USP MEM Cytotoxicity, 2004; USP 27, NF 22, 2004, <87> Biological Reactivity, <i>In Vitro</i> . Compounds: EB70 & EW70 |
| US FDA 9CFR94.18, FDA 21CFR589, US Pharmacopeia Vol 30<5>, EU 2004/C 24/03, EU 2002/195/EC, EU EMEA/410/01, CPMP/QWP/227/02, CVMP/134/02 & CVMP/145/197 | AH/TSE Free™ Animal and Human / Transmissible Spongiform Encephalopathy Free (Animal and Human Derived Ingredient Free) |
| EU RoHS Directive 2002/95/EC | Restrictive Substances, EIA Material Composition Annex A: Level A Materials, Table I & Table II. |
| China RoHS Directive SJ/T11363-2006 | Hazardous Substances, Table I. |
| CODEX Std 192-1995 | Not yet listed. |

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