Marco Compound # T1001

Technical Datasheet

<table>
<thead>
<tr>
<th>Material</th>
<th>FEP</th>
<th>MC227</th>
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</thead>
<tbody>
<tr>
<td>ASTM D2116-95a</td>
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</tbody>
</table>

Description

- Fep (fluorinated ethylene propylene)
- Fluoropolymer translucent virgin grade

Application

- This material has excellent chemical inertness, heat resistance and low coefficient of friction

Temperature

- Low temperature service limit –76F (–60 C).
- Upper temperature continuous service limit +428F (+204 C).

Products

- Jacket material for our range of Encapsulated O Rings

Approvals

- This grade of material is compliant with US FDA regulation 21 CFR 177.1550 § (a) (1) and (b) as finished articles.
- 3-A Sanitary Standards for Multiple-Use Plastic Materials Used as Product Contact Surfaces for Dairy Equipment Number 20-17.
- US Pharmacopeia (USP) Class V1

Physical Properties

General

- Specific Gravity: ASTM D792 2.15
- Hardness shore D (slab): ASTM D2240 55
- Elongation %: ASTM D638 300
- Tensile strength Psi (Mpa) (Dumbbell): ASTM D638 4350(30)
- Flexural modulus Psi (Mpa) (Dumbbell): ASTM D790 95065(655)
- MIT folding endurance (0.18-0.20mm film): ASTM D2176 80,000

Thermal

- Melting point F ©: D2116 490(255)
- Coefficient of linear thermal expansion: D696 10-5 K⁻¹
  100 – 160F (38-71 C)

Environmental

- Water absorption % 24 Hrs: D570 < 0.01
- Weathering: excellent
## Marco Compound # T1001 Viton O-ring

| Material | Genuine Viton® ‘A’ 75 Shore  
|          | ASTM D 2000 M2HK 710 B37 B38 C12 |
| Description | Low compression set Viton ‘A’ O Ring Grade.  
|            | Copolymer with 66% fluorine content.  
|            | Cure system is Bisphenol. |
| Application | This material has excellent resistance to oils, fuels, lubricants,  
|            | most mineral acids, aliphatic and aromatic hydrocarbons. |
| Temperature | Low temperature service limit –4F (–20 C).  
|            | Upper temperature continuous service limit 400F (+204 C).  
| Products | Extrusions (cords/profiles/tubes)  
|          | Mouldings (Custom/O Rings)  
|          | VulcOrings & Encapsulated O Rings |

### Physical Properties

#### Original
- Specific Gravity | ASTM D1817 | 2.32 |
- Durometer shore A (slab) | ASTM D2240 | 79 |
- Elongation % (Dumbbell) | ASTM D412 | 233 |
- Tensile strength Psi (Mpa) (Dumbbell) | ASTM D412 | 1672 (11.52) |
- Modulus @ 100% % | ASTM D945 | 7.2 |
- Compression set % 22h @ 347F (175C) (slab) | ASTM D395B | 4.6 |
- Compression set % 22h @ 400F (200C) | 7.0 |
- Low temperature TR-10 0F (C) * | ASTM D1329 | 1.4 (-17) |

* nominal value based on a typical 75 shore vulcanizate

#### Heat Ageing 70h @ 482F (250C) ASTM D573
- Durometer change points shore A | +4 |
- Elongation change % | -34 |
- Tensile strength change Psi (Mpa) | +537 (+3.7) |
- Weight loss grams | 0.02 |

#### Fluid Immersion Oil No3 70h @ 302F (150C) ASTM D 471
- Volume change % | +4.56 |
- Durometer change points shore A | 0.5 |
- Elongation change % | -6.5 |
- Tensile strength change Psi (Mpa) | +68 (+0.47) |

#### Fluid Immersion Fuel C 70h @ 302F (23C) ASTM D471
- Volume change % | +3.0 |

This information is to the best of our knowledge accurate and reliable. However, Marco Rubber makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer’s application. It’s the customer’s responsibility to evaluate parts prior to use.
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<tbody>
<tr>
<td>Durometer change points shore A</td>
<td>-1</td>
</tr>
<tr>
<td>Elongation change %</td>
<td>-3</td>
</tr>
<tr>
<td>Tensile strength change Psi (Mpa)</td>
<td>-32</td>
</tr>
<tr>
<td><strong>Ozone Resistance</strong> 70h @ 40C (50pphm)</td>
<td>ASTM D1171</td>
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