Versaflex™ & Versalloy™ Specialty Engineered Materials
Thermoplastic Elastomers for Healthcare Applications

Delivering specialized thermoplastic elastomer (TPE) solutions for demanding healthcare applications, PolyOne has performance-grade materials that are approved for USP VI, ISO 10993-4 and 10993-5. Formulated without phthalate plasticizers, several of our grades offer high clarity, bond to a variety of substrates and can be customized. Common healthcare applications include medical tubing, gaskets and stoppers, bags, bottles and films.

VERSAFLEX™
HC MEDICAL TUBING SERIES
• Improve extrusion rates, achieve high service temperature performance or increase clarity in medical tubing

VERSIFLEX™
HC GASKETS & STOPPERS SERIES
• Achieve no coring, good puncture and resealability in static stoppers
• Meet low COF and low stiction requirements in dynamic seals

VERSIFLEX™
CL E SERIES
• Increase clarity and flexibility in bags, bottles and films

VERSALLOY™
HC SERIES
• Obtain better flow in long, thin paths and lower shrink rates versus typical TPVs with our alloys, made with Santoprene™ TPV
• Color easily and obtain a smooth tactile feel
## General Properties

<table>
<thead>
<tr>
<th>Color</th>
<th>Hardness</th>
<th>Specific Gravity</th>
<th>Compression Set @ 23°C</th>
<th>Compression Set @ 100°C</th>
<th>100% Modulus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ASTM/ISO</td>
<td>ASTM %</td>
<td>ISO %</td>
<td>ASTM/ISO %</td>
<td>ASTM psi</td>
</tr>
</tbody>
</table>

### Versaflex™ HC MT Series

- **Versaflex™ HC MT222**
  - Color: Clear
  - Hardness: 66A
  - Specific Gravity: 0.88
  - Compression Set @ 23°C: 14
  - Compression Set @ 100°C: -
  - 100% Modulus: 334 psi 2.3 Mpa

- **Versaflex™ HC MT224**
  - Color: Clear
  - Hardness: 75A
  - Specific Gravity: 0.89
  - Compression Set @ 23°C: 19
  - Compression Set @ 100°C: -
  - 100% Modulus: 468 psi 3.23 Mpa

- **Versaflex™ HC MT226**
  - Color: Clear
  - Hardness: 84A
  - Specific Gravity: 0.88
  - Compression Set @ 23°C: 20
  - Compression Set @ 100°C: -
  - 100% Modulus: 606 psi 4.17 Mpa

- **Versaflex™ HC MT317**
  - Color: Clear
  - Hardness: 68A
  - Specific Gravity: 0.89
  - Compression Set @ 23°C: 17
  - Compression Set @ 100°C: 69
  - 100% Modulus: 450 psi 3.1 Mpa

### Versaflex™ HC Gaskets & Stoppers Series

- **Versaflex™ HC 2110-35N**
  - Color: Natural
  - Hardness: 34A
  - Specific Gravity: 0.9
  - Compression Set @ 23°C: 47
  - Compression Set @ 100°C: 47
  - 100% Modulus: 145 psi 1 Mpa

- **Versaflex™ HC 2110-43N**
  - Color: Natural
  - Hardness: 43A
  - Specific Gravity: 0.98
  - Compression Set @ 23°C: 46
  - Compression Set @ 100°C: 46
  - 100% Modulus: 134 psi 0.92 Mpa

- **Versaflex™ HC 2110-57B**
  - Color: Black
  - Hardness: 59A
  - Specific Gravity: 1.01
  - Compression Set @ 23°C: 37
  - Compression Set @ 100°C: 37
  - 100% Modulus: 369 psi 2.54 Mpa

### Versaflex™ CL E Series

- **Versaflex™ CL E85**
  - Color: Clear
  - Hardness: 84A
  - Specific Gravity: 0.9
  - Compression Set @ 23°C: 72
  - Compression Set @ 100°C: 72
  - 100% Modulus: 752 psi 5.18 Mpa

- **Versaflex™ CL E90**
  - Color: Clear
  - Hardness: 90A
  - Specific Gravity: 0.9
  - Compression Set @ 23°C: 73
  - Compression Set @ 100°C: 73
  - 100% Modulus: 1000 psi 6.89 Mpa

- **Versaflex™ CL E95**
  - Color: Clear
  - Hardness: 95A
  - Specific Gravity: 0.9
  - Compression Set @ 23°C: 71
  - Compression Set @ 100°C: 71
  - 100% Modulus: 369 psi 2.54 Mpa

### Versalloy™ HC 9210 Series

- **Versalloy™ HC 9210-45N**
  - Color: Natural
  - Hardness: 45A
  - Specific Gravity: 0.89
  - Compression Set @ 23°C: 39
  - Compression Set @ 100°C: 39
  - 100% Modulus: 160 psi 1.1 Mpa

- **Versalloy™ HC 9210-55N**
  - Color: Natural
  - Hardness: 53A
  - Specific Gravity: 0.89
  - Compression Set @ 23°C: 44
  - Compression Set @ 100°C: 44
  - 100% Modulus: 208 psi 1.44 Mpa

- **Versalloy™ HC 9210-70N**
  - Color: Natural
  - Hardness: 70A
  - Specific Gravity: 0.89
  - Compression Set @ 23°C: 53
  - Compression Set @ 100°C: 53
  - 100% Modulus: 356 psi 2.45 Mpa

### Versalloy™ HC 9220 Series

- **Versalloy™ HC 9220-70**
  - Color: Natural
  - Hardness: 70A
  - Specific Gravity: 0.95
  - Compression Set @ 23°C: 51
  - Compression Set @ 100°C: 51
  - 100% Modulus: 453 psi 3.12 Mpa

- **Versalloy™ HC 9220-80**
  - Color: Natural
  - Hardness: 80A
  - Specific Gravity: 0.94
  - Compression Set @ 23°C: 59
  - Compression Set @ 100°C: 59
  - 100% Modulus: 553 psi 3.67 Mpa

- **Versalloy™ HC 9220-90**
  - Color: Natural
  - Hardness: 90A
  - Specific Gravity: 0.94
  - Compression Set @ 23°C: 55
  - Compression Set @ 100°C: 55
  - 100% Modulus: 1030 psi 8.13 Mpa

### Standard Healthcare Grades

- **Versaflex™ G2705N**
  - Color: Natural
  - Hardness: 60A
  - Specific Gravity: 0.88
  - Compression Set @ 23°C: -
  - Compression Set @ 100°C: -
  - 100% Modulus: -

- **Versaflex™ CL 2242**
  - Color: Clear
  - Hardness: 43A
  - Specific Gravity: 0.89
  - Compression Set @ 23°C: 23
  - Compression Set @ 100°C: -
  - 100% Modulus: 152 psi 1.05 Mpa

- **Versaflex™ CL 2250**
  - Color: Clear
  - Hardness: 50A
  - Specific Gravity: 0.89
  - Compression Set @ 23°C: 20
  - Compression Set @ 100°C: -
  - 100% Modulus: 220 psi 1.52 Mpa

### Versaflex™ OM Series

- **Versaflex™ OM 1040X**
  - Color: Natural
  - Hardness: 42A
  - Specific Gravity: 0.92
  - Compression Set @ 23°C: 22
  - Compression Set @ 100°C: -
  - 100% Modulus: 180 psi 1.24 Mpa

- **Versaflex™ OM 3060**
  - Color: Clear
  - Hardness: 59A
  - Specific Gravity: 0.9
  - Compression Set @ 23°C: 33
  - Compression Set @ 100°C: -
  - 100% Modulus: 420 psi 2.9 Mpa

For further information on specific grades, review technical data sheets.
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<thead>
<tr>
<th>TENSILE PROPERTIES</th>
<th>REGULATORY</th>
<th>OTHER</th>
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<td>300% Modulus ISO Mpa</td>
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