Minicel® Technical Data

**type MS**

**Product Definition**

Compared with traditional crosslinked polyolefin bun foams, Minicel MS has superior resistance to permanent set, is more resilient, possesses high coefficient of friction, and is softer at higher densities. This last feature permits the use of high density foams with their better physical properties while maintaining softness and conformability.

Minicel MS grades are closed-cell chemically crosslinked polyolefin foams. The Minicel manufacturing process produces fine-celled, smooth surfaced, elastomeric foams. The foams are available in a variety of standard and custom colors. They can be fire retarded to meet specific requirements.

Minicel MS is the firmest of the S types at a given density while providing the best temperature resistance of the S-types.

**Product Characteristics**

- Recovery from compression
- Resilient
- High coefficient of friction
- Soft, conformable at higher density
- Buoyant
- Thermacl, electrical insulator
- Low water absorption
- Chlorine and plasticizer-free
- Impervious to mildew, mold, rot, and bacteria
- Excellent chemical resistance
- Does not contain CFCs, HCFCs, and Hydrocarbon foaming agents

**Product Form**

- Minicel MS200, MS300, MS380, MS600 & MS1000 are produced in molded bun form.
- Standard slab sizes after trimming are:
  - MS200, MS300, MS380, & MS600
  - 3" X 48" X 48"
  - 3" X 48" X 54"
  - 4" X 48" X 48"
- MS100
  - 1 3/8" X 40" X 40"
  - 2.5" X 48" X 48"

**Graphs**

- **Compression Strength**
  - psi @ 25%

- **Tensile Strength**
  - Machine Direction
  - psi @ 25%

- **Elongation to Break**
  - Machine Direction
  - psi @ 25%

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100 Shepard Street, Lawrence, MA 01843-1089 800.225.0668 — 978.685.2557 — 978.685.9861
# MS Bun Foam

## Preliminary Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>MS-200</th>
<th>MS-300</th>
<th>MS-380</th>
<th>MS-600</th>
<th>MS-1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density, pcf * lbs/ft³ (pcf)</td>
<td>2</td>
<td>3</td>
<td>3.8</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Compression Strength * psi @ 25%</td>
<td>5.4</td>
<td>7.9</td>
<td>10.6</td>
<td>16.0</td>
<td>30.4</td>
</tr>
<tr>
<td>psi @ 50%</td>
<td>13.1</td>
<td>16.9</td>
<td>20.4</td>
<td>28.6</td>
<td>54.4</td>
</tr>
<tr>
<td>Tensile Strength * psi</td>
<td>51</td>
<td>68</td>
<td>86</td>
<td>141</td>
<td>271</td>
</tr>
<tr>
<td>Elongation to Break * %</td>
<td>256</td>
<td>328</td>
<td>326</td>
<td>344</td>
<td>364</td>
</tr>
<tr>
<td>Tear Resistance * lbs/inch</td>
<td>7</td>
<td>11</td>
<td>13</td>
<td>25</td>
<td>49</td>
</tr>
<tr>
<td>Compression Set * % of original thickness</td>
<td>12.8</td>
<td>7.4</td>
<td>4.7</td>
<td>7.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Thermal Stability **</td>
<td>-1.4</td>
<td>-1.3</td>
<td>-1.4</td>
<td>-1.8</td>
<td>-1.1</td>
</tr>
<tr>
<td>Three hours @ 158 degrees F % lineal shrinkage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended Temperature Range **</td>
<td>-110 to</td>
<td>-110 to</td>
<td>-110 to</td>
<td>-110 to</td>
<td>-110 to</td>
</tr>
<tr>
<td>Degrees F</td>
<td>+180</td>
<td>+180</td>
<td>+180</td>
<td>+180</td>
<td>+180</td>
</tr>
</tbody>
</table>

* ASTM D3575
** Voltek test method

Note: These physical properties are from limited production runs and are subject to change when more data becomes available.

This information on Minicel chemically crosslinked polyethylene foam is presented to our best knowledge. All test data are average values unless stated and should be considered as guidelines to the performance of this product and should not be used as specifications.