Classification of ASTM Flexible Cellular Materials

Sponge products are identified by a three-character Grade Number (example: 2A2). The three characters represent type, class and grade, and are defined as follows:

**TYPE**
- Type 1 = Open Cell
- Type 2 = Closed Cell

**CLASS**
- Class A = Non-oil resistant (Example: EPDM)
- Class B = Oil resistant, low swell (Example: Nitrile)
- Class C = Oil resistant, medium swell (Example: Neoprene)
- Class D = Extreme Temperature resistant (Example: Silicone)

**GRADE**
Grade ratings represent compression deflection, or the amount of force in pounds per square inch to deflect the sample 25% of its height.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>less than 2 psi</td>
</tr>
<tr>
<td>1</td>
<td>2 to 5 psi</td>
</tr>
<tr>
<td>2</td>
<td>5 to 9 psi</td>
</tr>
<tr>
<td>3</td>
<td>9 to 13 psi (for Classes A, B, C)</td>
</tr>
<tr>
<td></td>
<td>9 to 15 psi (for Class D)</td>
</tr>
<tr>
<td>4</td>
<td>13 to 17 psi (for Classes A, B, C)</td>
</tr>
<tr>
<td></td>
<td>22 to 30 psi (for Class D)</td>
</tr>
<tr>
<td>5</td>
<td>17 to 25 psi (for Classes A, B, C)</td>
</tr>
<tr>
<td></td>
<td>22 to 30 psi (for Class D)</td>
</tr>
</tbody>
</table>

**SUFFIX**
Suffix numbers that follow the suffix letters denote different testing parameters or conditions for that suffix. Once testing is complete, a Line Call Out is assigned to the compound according to the Basic and Suffix requirements the compound has met.

**SUFFIX TEST LETTER REQUIRED**
- A = Heat Resistance
- B = Compression Set
- C = Ozone or Weather Resistance
- D = Compression Deflection Resistance
- E = Fluid Resistance
- F = Low Temperature Resistance
- G = Tear Resistance
- J = Abrasion Resistance
- K = Adhesion Resistance
- L = Water Absorption
- M = Flammability Resistance
- N = Impact Resistance
- P = Staining Resistance
- R = Resilience
- W = Density
- Z = Any Special Requirements

Example Line Call Out for Sponge

**ASTM D1056 2C2 A1 B2 E1 Z**

(Z = Material Passes FMVSS 302)