



## 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.

- Grade 0 = less than 2 psi
- Grade 1 = 2 to 5 psi
- Grade 2 = 5 to 9 psi
- Grade 3 = 9 to 13 psi (for Classes A, B, C)  
9 to 15 psi (for Class D)
- Grade 4 = 13 to 17 psi (for Classes A, B, C)  
22 to 30 psi (for Class D)
- Grade 5 = 17 to 25 psi (for Classes A, B, C)  
22 to 30 psi (for Class D)

### 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)