BRAZING AND SEALING JIGS AND FIXTURES

Specialty graphite materials for brazing and glass to metal sealing of electronic packages.
JIGS AND FIXTURES
FOR BRAZING
AND GLASS SEALING

Brazing and Glass to Metal sealing fixtures and jigs are used to encapsulate today's sophisticated electronic packages.

Mersen's Graphite Grades 2124, 2160 and 2175 are specially formulated to provide the ideal combination of attributes to maximize efficiency in these connection assemblies.

These critical attributes include:

- Graphite CTE matching electronic package expansion to provide tight connector tolerance requirements.
- Ability to machine intricate detail.
- Resistance to wear and oxidation resulting in extended fixture life.

Specific applications by Grade:

- **GRADE 2124**
  Cost effective material for fixturing. Machinable to fine detail. Provides good oxidation and wear resistance extending fixture life.

- **GRADE 2160**
  Higher density and finer-grain size provide longer fixture life. Excellent flexural strength and high hardness resist erosion in more abrasive applications.

- **GRADE 2175**
  Super-fine grain size and unsurpassed machinability provide ultimate performance in fine detail applications. Highest graphite CTE to meet tightest dimensional applications. Superior strength and hardness allow for even greater extended fixture life and excellent value.
## Typical Physical Properties & Block Sizes

<table>
<thead>
<tr>
<th>Grade</th>
<th>Apparent Density</th>
<th>Specific Resistance</th>
<th>Flexural Strength</th>
<th>Rockwell Hardness</th>
<th>CTE @ 1000°C</th>
<th>Particle Size</th>
<th>Standard Block Size(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2124</td>
<td>1.84 g/cm³</td>
<td>1,140 μΩ.cm</td>
<td>58 MPa</td>
<td>80 (H)</td>
<td>5.5 x 10⁻⁶ /°C</td>
<td>13 µ</td>
<td>308 x 620 x 915 mm</td>
</tr>
<tr>
<td></td>
<td>114 lbs/ft³</td>
<td>0.00045 Ω.in</td>
<td>8,400 psi</td>
<td>80 (H)</td>
<td>3.1 x 10⁻⁶ /°F</td>
<td>13 µ</td>
<td>12 x 24 x 36 in</td>
</tr>
<tr>
<td>2160</td>
<td>1.86 g/cm³</td>
<td>1,270 μΩ.cm</td>
<td>76 MPa</td>
<td>95 (H)</td>
<td>5.8 x 10⁻⁶ /°C</td>
<td>5 µ</td>
<td>305 x 305 x 915 mm</td>
</tr>
<tr>
<td></td>
<td>116 lbs/ft³</td>
<td>0.00050 Ω.in</td>
<td>11,000 psi</td>
<td>95 (H)</td>
<td>3.2 x 10⁻⁶ /°F</td>
<td>5 µ</td>
<td>12.5 x 12.5 x 36 in</td>
</tr>
<tr>
<td>2175</td>
<td>1.88 g/cm³</td>
<td>1,320 μΩ.cm</td>
<td>86 MPa</td>
<td>95 (H)</td>
<td>7.5 x 10⁻⁶ /°C</td>
<td>&lt; 4 µ</td>
<td>305 x 305 x 100 mm</td>
</tr>
<tr>
<td></td>
<td>118 lbs/ft³</td>
<td>0.00052 Ω.in</td>
<td>12,500 psi</td>
<td>95 (H)</td>
<td>4.5 x 10⁻⁶ /°F</td>
<td>&lt; 4 µ</td>
<td>12 x 12 x 6 in</td>
</tr>
</tbody>
</table>

### Coefficient of Thermal Expansion (CTE)

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Global expert in materials and solutions for extreme environments as well as in the safety and reliability of electrical equipment. Mersen designs innovative solutions to address its clients’ specific needs to enable them to optimize their manufacturing process in sectors such as energy, transportation, electronics, chemical, pharmaceutical and process industries.

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