High Performance Low Mass Kiln Furniture
from SELEE Corporation (ISO 9001 Certified)

- Fast heat-up reduces energy consumption
- Quick cool-down minimizes “heat sink” effect
- Shorter total firing cycle maximizes production
- Uniform cool-down minimizes thermal gradient
- Low mass material minimizes drag resistance during sintering

SELEE Corporation’s Micromass® LMKF is a highly innovative lightweight alternative to typical commercially available dense kiln furniture.

Micromass® LMKF effectively utilizes full kiln weight capacity by allowing more parts to be loaded per firing cycle.

This high-purity Alumina material eliminates cross-contamination of production parts. Micromass® LMKF is chemically inert and will not react with most materials being fired.

A porous material with a smooth machinable surface, Micromass® LMKF has the ability to heat up and cool down faster than dense kiln furniture, which leads to significantly shorter firing cycles.

Micromass® LMKF has excellent thermal shock resistance and performs exceptionally well in critical thermal processing applications.

For information on how Micromass® LMKF can benefit your demanding process application, please contact SELEE Corporation.

Micromass® Micrograph (magnification 2000X)
Product Offering

Available Sizes:
- Length: 12” maximum
- Width: 8.75” maximum
- Thickness: 0.125” minimum, 0.50” maximum
- Parallelism: 0.025”

Tolerances:
- Length/Width: +/- 0.10”
- Thickness: +/- 0.06”

Technical Data:
Thermal Expansion: 9x10^-6 in/in/°C
Maximum Use Temperature: 1500°C/2732°F
Standard Density (% of theoretical): 30-35%
Bulk Density (average): 1.23-1.44 g/ml
MOR at Room Temperature: 1500 psi/10.3 MPa
MOR at 1500°C: 300 psi/2.1 MPa

Thermal Shock Properties:
The thermal shock properties vary by part size and are not completely understood.
Fastest Current Cycle:
- Ramp up: 4-6°C/min
  8-10°F/min
- Cool down: 8-10°C/min
  14-18°F/min

Thermal cycles faster than above should be evaluated before recommending Micromass®.

Material Specifications:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Specification</th>
<th>Typical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al₂O₃</td>
<td>&gt;90%</td>
<td>91%</td>
</tr>
<tr>
<td>ZrO₂</td>
<td>&lt;10%</td>
<td>9%</td>
</tr>
<tr>
<td>CaO</td>
<td>0.07%</td>
<td>420 ppm</td>
</tr>
<tr>
<td>K</td>
<td>0.05%</td>
<td>&lt;10 ppm</td>
</tr>
<tr>
<td>Na₂O₃</td>
<td>0.35%</td>
<td>24 ppm</td>
</tr>
<tr>
<td>SiO₂</td>
<td>0.10%</td>
<td>810 ppm</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>0.08%</td>
<td>75 ppm</td>
</tr>
</tbody>
</table>

Contact:
Mark Heamon
Castshop and New Products Manager
SELEE Corporation
Cell: +1 (770) 329-5373
Email: mheamon@selee.com

SELEE Corporation
700 Shepherd Street
Hendersonville, NC 28792, USA
Tel: (800) 842-3818 or +1 (828) 697-2411
Fax: +1 (828) 693-1868
www.selee.com

BRC2005-04, Rev. 4, 05 December 2012