SELEE CORPORATION Micromass® LMKF

Low Mass Kiln Furniture

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.

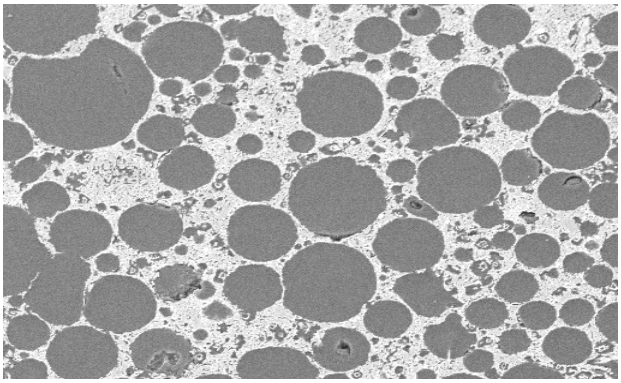
This high-purity Alumina material eliminates cross-contamination of production parts. **Micromass® LMKF** is chemically inert and will not react with most materials being fired.

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.

- ***High purity***
- ***Light weight, low mass material***
- ***Excellent thermal shock resistance***
- ***Available in custom shapes or plates for in-house machining***
- ***Easily machinable***
- ***Engineering design support***



Micromass® Micrograph (magnification 2000X)

Micromass®

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:

Characteristics	Specification	Typical Value
Al_2O_3	>90%	91%
ZrO_2	<10%	9%
CaO	0.07%	420 ppm
K	0.05%	<10 ppm
Na_2O_3	0.35%	24 ppm
SiO_2	0.10%	810 ppm
Fe_2O_3	0.08%	75 ppm

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