360 MATERIALS
Because Every Degree Counts

Low K Silica Insulation
1000C & 1200C



Low K Silica insulation boards are pressed silica micorspheres with an average pore size less than the mean free path of air, thereby eliminating ***convection***. The infinitesimal sphere to sphere contact minimizes ***conduction***. Specifically designed opacifiers are added to limit the amount of ***radiation*** transmitted. This control of all three modes of heat transfer results in the most efficient commercially available insulation products now available.

This structure results in a material with thermal conductivity 10 times less than ceramic fiber products (and even less than still air).

Boards can be offered individually encapsulated in polyethylene film,aluminum foil or fiberglass cloth to make it resistant to moisture and easier to handle and install. It is also available in thinner flexible panel form with the fiberglass cloth encapsulation for wrapping around pipes and cylinders.

TECHNICAL BENEFITS

- Extreme low thermal conductivity 0.02 W/mK
- Extreme thermal shock resistance
- Excellent thermal stability
- Low heat storage
- Availabe in rigid boards, flexible panels and round half-cylinders

OPERATIONAL BENEFITS

- Cost effective
- Saves space
- Lowers weight
- Lowered energy costs
- Improved process temperature control with higher product yield
- No respirable fibers (Non-RCF)
- Colder, safer cold face

P.O. Box 317, Chester, NY 10918 www.360mtls.com 845-645-3635 sales@360mtls.com

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1000C & 1200C

Material Properties & Characteristics

Grade	1000	1200
Maximum Use Temperature (deg C)	1000	1200
%Shrinkage 12 hr at Max Use Temp – 1 side	0.5	3
Density (pcf)	17	28
Nominal Composition (wt%)		
Silica	80	60
Silicon Carbide	15	-
Alumina	-	30
Other Oxides	5	10
Thermal Conductivity at 200C (W/mK)	0.022	0.029
Thermal Conductivity at 400C (W/mK)	0.025	0.033
Thermal Conductivity at 800C (W/mK)	0.038	0.044
Specific Heat at 800C (kJ/kgK)	0.80	1.07
Emissivity	0.95	0.97
%Compression at 15 psi	3	2
Cold Crushing Strength (psi)	60	80

TECHNICAL SUPPORT

Drawing upon 30 years experience in ceramics and thermal processing, 360 Materials supplies material solutions for all atmospheres up to 2400C.

IN STOCK INVENTORY

Call us at (845) 645-3635

CUSTOM SIZING

Custom sizes and shapes available upon request.

For more information on any of our products or services please contact us at: (845) 645 – 3635 or sales@360mtls.com

Standard Sizes

- Item LK1001 – Low K 1000 board, 25.5” x 39.5” x 0.50” tk
- Item LK1002 – Low K 1000 board, 25.5” x 39.5” x 1” tk
- Item LK1003 – Low K 1000 board, 25.5” x 39.5” x 2” tk
- LK 1000 boards also available in 39.5” x 52” on special order

- Item LK1201 – Low K 1200 board, 20.5” x 23.75” x 0.50” tk
- Item LK1202 – Low K 1200 board, 20.5” x 23.75” x 1” tk
- Item LK1203 – Low K 1200 board, 20.5” x 23.75” x 2” tk
- LK 1200 boards also available in 0.2” tk on special order