CERAMIC FIBER BOARD / PAPER / COTTON

ENGINEERING SPECIFICATION CHART

✔ High Temperature Resistance ✔ Low Thermal Conductivity ✔ Lightweight & Energy Efficient

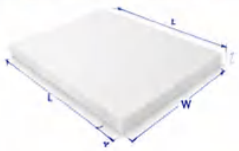
1. MATERIAL STRUCTURE

- Alumina Silica Fiber
- High Purity
- Needle-Punched Fiber Structure
- Excellent Thermal Insulation
- Low Heat Storage

2. CHEMICAL COMPOSITION (TYPICAL)

Component	Content (%)
SiO_2	52 – 55
Al_2O_3	44 – 47
ZrO_2	≤ 1.5
Fe_2O_3	≤ 1.0
TiO_2	≤ 0.2
$Na_2O + K_2O$	≤ 0.3
Others	≤ 1.0

3. CERAMIC FIBER BOARD



Working Temperature: 1260°C / 1430°C / 1600°C
Color: White
Classification Temp.: 1260°C / 1430°C / 1600°C

Density (kg/m³)	Thickness (mm)	Size L × W (mm)	Thermal Conductivity at 400°C (W/m-K)
96	10, 20, 25, 30, 40, 60	1000 × 600	≤ 0.10
128	10, 20, 25, 30, 40, 60	1000 × 600	≤ 0.11
160	10, 20, 25, 30, 40, 60	1000 × 600	≤ 0.12

Tensile Strength (MPa)	≥ 0.20
Linear Shrinkage (%, 24h)	≤ 3.0 (1260°C) / ≤ 3.0 (1430°C) / ≤ 3.0 (1660°C)
Heat Storage (kJ/kg·K)	≤ 1.03
Permanent Line Change (%)	≤ 1.5 (1260°C) / ≤ 1.5 (1430°C) / ≤ 1.5 (1660°C)

4. CERAMIC FIBER PAPER

Working Temperature: 1260°C / 1430°C / 1600°C
Color: White
Classification Temp.: 1260°C / 1430°C / 1600°C

Thickness (mm)	Width (mm)	Roll Length (m)	Thermal Conductivity at 400°C (W/m-K)
0.5	610 / 1000 / 1220	10 / 20 / 30 / 40	≤ 0.10
1	610 / 1000 / 1220	10 / 20 / 30 / 40	≤ 0.10
2	610 / 1000 / 1220	10 / 30 / 30 / 40	≤ 0.11
3	610 / 1000 / 1220	10 / 30 / 30 / 40	≤ 0.11
5	610 / 1000 / 1220	10 / 20 / 30 / 40	≤ 0.12

Tensile Strength (MPa)	≥ 0.20
Linear Shrinkage (%, 24h)	≤ 3.0 (1260°C) / ≤ 3.0 (1430°C) / ≤ 3.0 (1600°C)
Heat Storage (kJ/kg·K)	≤ 1.05
Organic Content (%)	≤ 10

5. CERAMIC FIBER COTTON

Working Temperature: 1260°C / 1430°C / 1600°C
Color: White
Classification Temp.: 1260°C / 1430°C / 1600°C

Density (kg/m³)	Fiber Diameter (μm)	Package	Thermal Conductivity at 400°C (W/m-K)
64	2 – 4	Vacuum Packed	≤ 0.09
96	2 – 4	Vacuum Packed	≤ 0.10
128	2 – 4	Vacuum Packed	≤ 0.11

Tensile Strength (kPa)	≥ 8
Linear Shrinkage (%, 24h)	≤ 5.0 (1260°C) / ≤ 5.0 (1430°C) / ≤ 5.0 (1600°C)
Heat Storage (kJ/kg·K)	≤ 1.10
Organic Content (%)	≤ 10

6. COMMON PROPERTIES

Property	Typical Value
Operating Temperature	1260°C / 1430°C / 1600°C
Color	White
Thermal Conductivity (Mean 400°C)	≤ 0.10 – 0.12 W/m-K
Thermal Conductivity (Mean 800°C)	≤ 0.16 – 0.18 W/m-K
Thermal Conductivity (Mean 1000°C)	≤ 0.20 – 0.22 W/m-K
Chemical Stability	Excellent
Resistance to Thermal Shock	Excellent
Sound Absorption	Excellent
Non-combustible	Yes

7. STANDARD DIMENSIONS

BOARD (Sheet)

Standard Size: 1000 × 600 mm
Other sizes available

PAPER (Roll)

Standard Width: 610 / 1000 / 1220 mm
Standard Length: 10 / 20 / 30 / 40 m

COTTON (Bulk)

Vacuum Packed
Custom packaging available

8. TYPICAL APPLICATIONS

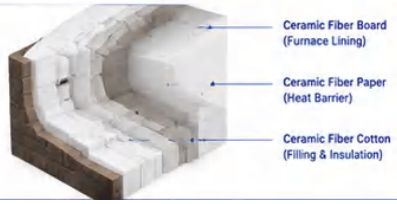
Industrial Furnaces · Kilns · Boilers · Heat Treatment Equipment
Petrochemical Plants · Foundry · Glass Industry · Metal Processing

9. TEMPERATURE GRADE COMPARISON

Grade	1260°C (Standard)	1430°C (High Alumina)	1600°C (Zirconia)
Classification Temperature (°C)	1260	1430	1600
Al_2O_3 Content (%)	44 – 46	47 – 50	39 – 41
ZrO_2 Content (%)	–	–	15 – 17
Max Operating Temp. (°C)	1100	1350	1500
Color	White	White	White

10. INSTALLATION NOTES

- Use appropriate cut tools to reduce fiber dust.
- Avoid mechanical vibration during installation.
- Ensure joints are tightly fitted to minimize heat loss.
- For best performance, use proper anchoring or supporting systems.



- Ceramic Fiber Board (Furnace Lining)
- Ceramic Fiber Paper (Heat Barrier)
- Ceramic Fiber Cotton (Filling & Insulation)