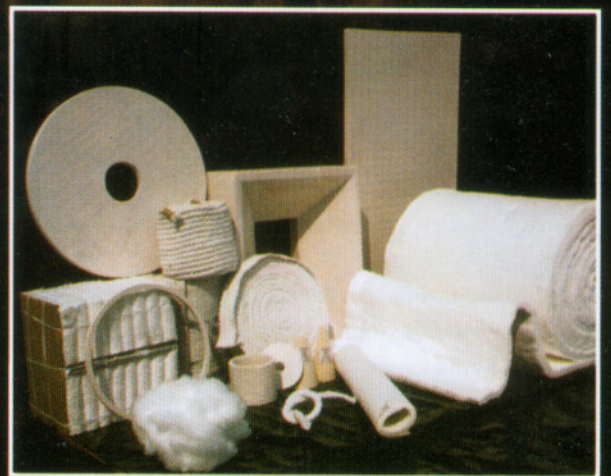




# **SUPERCERA**

CERAMIC FIBRE



BOARDS / VACUUM FORMED BLOCKS AND SHAPES / SPECIALITIES

# SUPERCERA

CERAMIC FIBRE

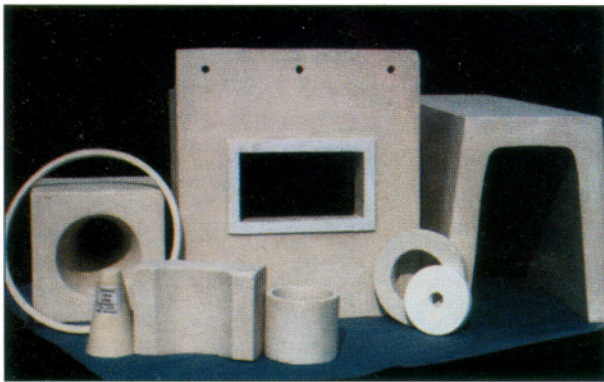
## BOARDS & BLOCKS

SUPERCERA Boards and Blocks are made from Superspun Supercera fibres by multi component organic / inorganic bonding process.

SUPERCERA Blocks and Shapes are obtained by vacuum suction of a mixture of Supercera ceramic fibres with organic and mineral binders. These vacuum formed products can be moulded and cured into a wide variety of shapes to have a smooth inside surface and a rougher outside, as demanded by the application.

SUPERCERA Fibre Boards, Blocks and Shapes are self supporting with excellent stability at high temperatures, having high resistance to thermal shock and chemical attack.

SUPERCERA Fibre Boards, Blocks and Shapes can be rendered machinable - to be sawed, drilled or machined, where required.

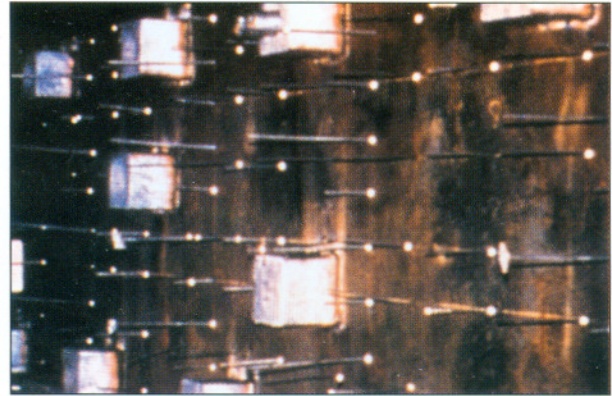


## APPLICATION (Vacuum Formed Shapes)

- ✓ Combustion chambers
- ✓ Domestic boiler doors
- ✓ Peep holes, Pipe Seals
- ✓ Special furnace lining parts
- ✓ Radiant element supports in vitroceramic hotplates (either electric resistance or halogen)

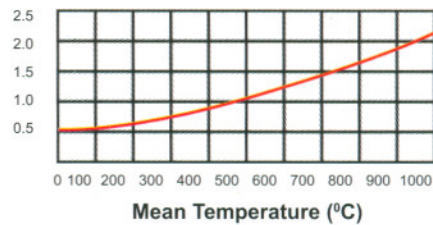
## APPLICATION (Boards and Blocks)

- ✓ Lining of : Furnaces including electric Furnaces; Flue and chimney of furnaces and kilns; Hot gas ducts; Combustion Chamber in central heating boilers; Glass tank side, end walls, and port neck; Low and high temperature driers
- ✓ Trough and distribution linings for conveying molten metal
- ✓ Refractory backup for bricks and castables
- ✓ Pouring forms for nonferrous castings
- ✓ High temperature baffles and muffles
- ✓ Heat shield for personnel protection
- ✓ Rigid high temperature gaskets and seals
- ✓ Expansion joints



BLOCK AND VACUUM FORMED SHAPES CAN BE MADE AVAILABLE AS PER DESIRED SPECIFICATIONS.

## THERMAL CONDUCTIVITY OF SUPERCERA BOARDS (TYPICAL FOR RTZ GRADE BOARDS) mW / cm°C



## AVAILABILITY (BOARDS)

Grade	Size (mm)	Available Thicknesses (mm)
HTZ, RTZ	1000 x 500 and 915 x 610	10-50 (in increments of 5)

## AVAILABILITY (BOARDS)

DENSITY *	260 - 320 kg/m <sup>3</sup>
DIMENSIONS (mm)	915 x 610 and 1000 x 500

\* Higher Density products offered on request.

## PHYSICAL PROPERTIES

Melting Temperature (°C)	1700-1760	
Specific Heat (KJ/KgK)	1.07	
Fibre Diameter (Mean)	2.8 μ	
Linear Shrinkage (%) after 24 hrs Firing / Soaking	1000°C	1.5
	1100°C	2.2
	1200°C	3.0
Bulk Density (per m <sup>3</sup> )	260-320	
Max Service Temp. (°C)	1260	

## Supercera Anchored Modules & Veneering Modules

Anchored Modules are made from folds of Supercera Ceramic fibre - the only superspun double-needled fibre in the country.



The module is held in compression by removable strapping. Each module has an integral anchoring system - the result of continuous R & D and advanced design.

Fixing of the module to metal shell is achieved by welding specially designed studs, supplied integral with the module, resulting in efficient, fast, and error-free installation.

Supercera Modules are ideal for full thickness lining for new furnaces as well as conversion into fibre lining in case of old furnaces. They enhance the furnace life and performance.

Supercera Veneering Modules improve the thermal efficiency of old brick linings with minimum downtime for repairs.

### Advantages

- ✓ Fast and efficient installation
- ✓ Lesser down time
- ✓ No gap between the casing plate and the module
- ✓ Faster cycling with increased plant utilization
- ✓ Higher fuel economy
- ✓ Lower installed cost
- ✓ Lower maintenance cost

### Application

- ✓ Reheating Furnaces
- ✓ Bell Annealing Furnaces
- ✓ Soaking Pit Seals and covers
- ✓ Ladle Preheaters
- ✓ Chemical Process Heaters
- ✓ Kilns
- ✓ Incinerators
- ✓ Reformers, etc.

### Typical Physical and Chemical Properties\*

Grade	Classification temp (°C)	Chemical Analysis (%)			
		Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	ZrO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>
HT	1425	32-36	44-48	16-18	Trace
RT	1260	46-48	52-54	-	Trace
RTZ	1300	40-44	50-54	4-6	Trace

Fibre diameter (micron) : 2-3

Fibre length (mm) : 150-200

\* These are indicative only.

### Availability Densities and Thicknesses

Type of Modules	Grade	Densities** (Kg/m <sup>3</sup> )	Available Thicknesses (mm)
Anchored	HT, RT	128, 160	100 - 300
Veneering	HT, RT	128, 160	50,75

\*\* Higher Densities are available on request.

## Speciality Products

### 1. Supercera Ceramic Fibre Cloth / Tape

Supercera Cloth / Tape is a high temp. speciality fabric used for variety of industrial applications. It contains 15-20% organic carrier fibre to facilitate the carding process, which may burn off at a lower temperature. This however does not change the mechanical features including strength. It exhibits excellent chemical stability, resisting attack from most corrosive agents. Available in standard thickness of 3mm. Other thicknesses available on request.



### Technical Details

#### Size / Packing

Cloth : 3mm x 300mm x 10 RMT  
3mm x 1000mm x 10 RMT

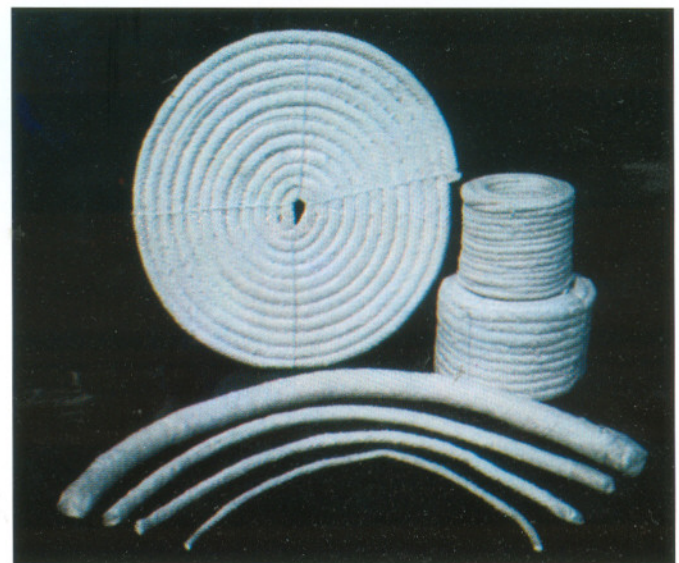
Tape : 3mm x 50mm x 25 RMT

### 2. Supercera Twisted Rope / Braids

Supercera Twisted Rope is a three-ply rope manufactured from Supercera long fibres. It contains 15-20% organic carrier fibre to facilitate the carding process which may burn off at a lower temperature.

Supercera Twisted Rope is a dense, resilient high temperature refractory possessing excellent thermal properties, chemical stability and high mechanical strength.

Supercera Braids : Supercera Braided Rope is available with SS 304/ SS 310 Braiding.



## Supercera Twisted Rope / Braids

### Technical Details

Size	: 6mm Dia. to 40 mm Dia.
Density	: 300 Kg/M3 (Min.)
Diameter Tolerance	: -15% to +30%
Length Tolerance	: -0, Excess Permitted.
Tensile Strength	: 1 Kg/Cm2
Packing	: 10/25 Rmt - Coils

### 3. Supercera Paper

Supercera Ceramic Paper is manufactured from high temperature Supercera Ceramic Fibre product containing 20-25% organic material to give it an extra ordinary pliability. If wet by water, steam or oil, its thermal and physical properties are restored up on drying.

### Technical Details

Size	: 1000mm x 500mm (other sizes on request)
Standard Thickness	: 1mm to 6mm
Dimension Tolerance	: -0, Excess Permitted.
Density	: 240 Kg/m3 (-15% to +30%)
Tensile Strength	: 0.4 Kg/cm2
Linear Shrinkage	: 3.5% maximum At 1260°C for 24 hours



Consult us for recommendation of thickness of Insulation and application to suit your end use condition.



THINK ENERGY CONSERVATION  
THINK ENVIRONMENT PROTECTION  
THINK LLOYD INSULATIONS



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