

## MILLBOARDS

**Millboards are a series of high density, rigid board products suitable for a variety of heat resistant and industrial sealing applications.**

Millboards are available in a range different formulations, each of which exhibits specific characteristics and physical properties. Millboards are also available in a selection of thicknesses.

**Millboard 85K** is based on a mineral wool / refractory ceramic fibre blend combined with selected fillers and is a commercial grade product suitable for applications with operating temperatures up to 850°C.

**Millboard 120K** is based on refractory ceramic fibres and various fillers and is a general purpose millboard for applications with operating temperatures up to 1100°C.

**Millboard 85KB** is manufactured from mineral wool fibres blended with clay fillers and is also suitable for applications with operating temperatures up to 850°C. The mineral wool fibres used are body-soluble.

**Millboard 120WT** is a formulation based on wollastonite and is suitable for applications with operating temperatures up to 1100°C. This product is not classified under EU directive 97/69/EC.

### General Characteristics

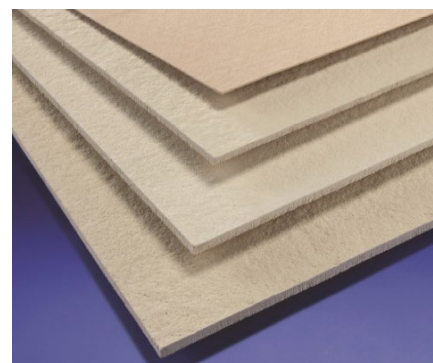
Millboards have the following outstanding characteristics:

- High temperature stability
- Low thermal conductivity
- Resistance to thermal shock
- High dimensional stability with low shrinkage
- Easy to cut with standard tools

### Typical Applications

- Refractory back-up
- High temperature gaskets and seals
- Heat shields
- Molten metal transfer systems (back-up insulation)
- Combustion chamber linings

Any new and/or special use of these products, whether or not in an application listed in our literature, must be submitted to our technical department for their prior written approval.



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### Typical Product Parameters

Millboards	85K	120K	85KB	120WT
Typical Chemical Analysis (wt. %)				
SiO <sub>2</sub>	55.5	43.6	53.3	44.5
Al <sub>2</sub> O <sub>3</sub>	24.4	34.1	20.6	17.9
CaO + MgO	-	0.9	3,7	20.2
Fe <sub>2</sub> O <sub>3</sub> + TiO <sub>2</sub>	3.0	1.7	3.9	1.2
Alkalis	1.5	1.0	1.9	0.9
Organic binders	10.0	11.5	10.0	12.8

### Physical Properties

	Grey	White	Grey	Brown
Colour	Grey	White	Grey	Brown
Product Density (kg/m <sup>3</sup> )	910	910	910	950
Tensile strength (MPa)	2.5	2.5	2.5	2.5
Use Limit (°C) *	850	1100	850	1100
Loss on Ignition (wt.%)	18.0	19.0	18.0	16.0

### Thermal Conductivity (W/mK)

Mean Temp.	Grey	White	Grey	Brown
400 °C	0.10	0.10	0.10	0.12
600 °C	0.11	0.11	0.11	0.13
800 °C	0.13	0.13	0.13	0.16
1000 °C	-	0.14	-	0.20

### Permanent Linear Shrinkage (%) 24 Hour Soak

Temperature	Grey	White	Grey	Brown
850 °C	<2	-	<2	-
1000 °C	-	<3	-	<1

\*Use limit refers to the maximum short term temperature limit. The maximum continuous use limit for boards depends upon application conditions. For certain applications continuous use temperature limits may be significantly reduced. For assistance or clarification please contact us. Where appropriate Physical Properties data measured according to EN 1094-1. Physical properties measured on 5mm thick boards.

## MILLBOARDS

### Availability

Thickness (mm)	85K	120K	85KB	120WT	Sheets per carton	Sheets per pallet
		<b>Sheet Dimensions</b>			<b>1000 x 1000 mm</b>	
1		✓		✓	100	1000
2	✓	✓	✓	✓	50	500
3	✓	✓	✓	✓	32	330
4	✓	✓	✓	✓	25	250
5	✓	✓	✓	✓	20	200
6		✓	✓	✓	16	165
8	✓		✓	✓	13	125
10	✓	✓	✓	✓	10	100

Other thicknesses / sizes may be available on request subject to minimum order requirements. Machined pieces according to drawings can also be supplied.

### Handling Information

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on handling precautions and emergency procedures. This must be consulted and fully understood before handling, storage or use.