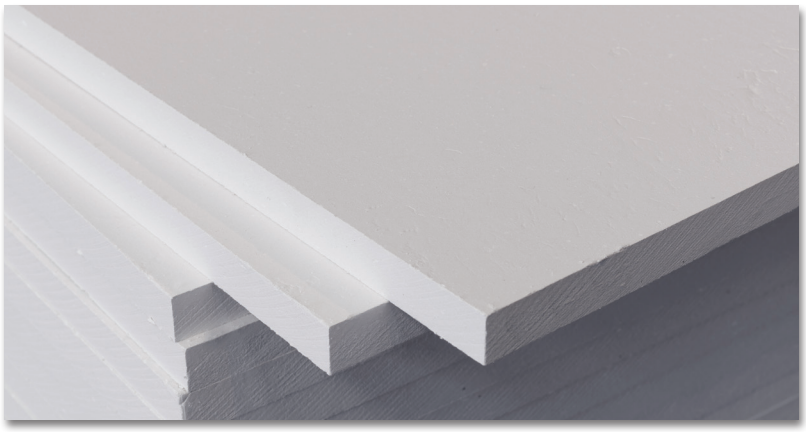
# MONOLUX®



## Structural calcium silicates

MONOLUX® materials are rigid insulation boards with a low thermal conductivity. They are specifically formulated without asbestos and mineral fibres.

MONOLUX® products have low shrinkage and high strength and therefore provide effective and stable insulation solutions for industrial applications.

MONOLUX® boards combine high mechanical strength, good thermal and electric insulation at high temperatures.

| **Technical data** | | |
|---|---|---|
| **Colour** | | white/beige |
| **Building material class** | EN 13501 | A1, non-combustible |
| **Classification temperature** | °C | 1000 |
| **Nominal density** | kg/m³ | 950 |
| **Cold compressive strength** | N/mm² | > 27 |
| **Bending strength** | N/mm² | 7 |
| **Shrinkage** | | |
| 1000 °C – 24h | % | 0.8 |
| **Breakdown voltage and electric strength** EN 60243-1 | kV/mm | 4.2 |
| **High voltage arc resistance - Level 40, 40mA** EN 61621 | seconds | 300 |
| **Volume resistance** DIN EN 62631-3-1 | | |
| 25 °C | Ω cm | $4.3 \times 10^{8}$ |
| 600 °C | Ω cm | $6.5 \times 10^{7}$ |
| **Surface resistance** EN 62631 3-2 | | |
| 25 °C | Ω cm | $8.1 \times 10^{8}$ |
| 600 °C | Ω cm | $7.5 \times 10^{7}$ |
| **Thermal conductivity** | | |
| 200 °C | W/m K | 0.20 |
| 400 °C | W/m K | 0.21 |
| 600 °C | W/m K | 0.22 |
| 800 °C | W/m K | 0.23 |
| **Specific heat capacity** | kJ/kg K | 1.03 |
| **Reversible thermal expansion** | | |
| 20–800 °C, after 2nd heating | $K^{-1}$ | $7.3 \times 10^{-6}$ |
| **Chemical analysis** | | |
| $SiO_2$ | % | 49 |
| CaO | % | 48 |
| $Fe_2O_3$ | % | 1.2 |
| LOI | % | 12 |
| **Alkalinity** | pH value | approx. 10 |
| **Moisture content** (air-dry) | % | < 5 |

| **Delivery sizes** | | |
|---|---|---|
| **Length** | mm | 2500 |
| **Width** | mm | 1200 |
| **Thickness** | mm | 12.7 / 20 / 25 / 30 / 40 / 50 / 60 |

| **Production tolerances** | | |
|---|---|---|
| **Length and width** | mm | ± 1 |
| **Thickness** | mm | ± 0.4 |

# MONOLUX®

## Properties & advantages

- Low thermal conductivity
- High mechanical strength
- High electrical and arc resistance
- Chemical resistance
- Moisture resistance
- Excellent machinability to close tolerances
- Tough and durable
- Dust free surface
- Asbestos free

## Application areas

### OIL AND GAS

- Load bearing pipe supports
- Heat shields

### HEAVY INDUSTRY

- Structural thermal separations
- Furnace bottom boards
- Dryer walls

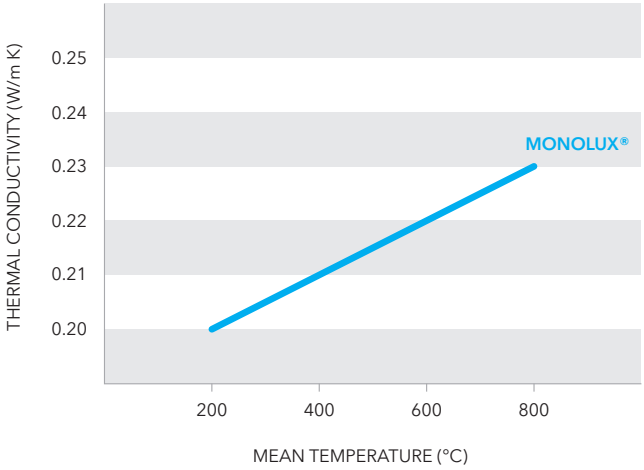
## Working & processing

MONOLUX® products can be accurately machined with special processing machinery and appropriate tools. The fine material structure allows the production of precision machined parts.

To avoid water absorbtion and to protect against aggressive atmospheres, Promat®-Impregnations are available.

When cutting to size, the maximum workplace concentration values for inhalable dust must be observed. Dust extraction is recommended. See product safety information sheet.

## Thermal conductivity



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