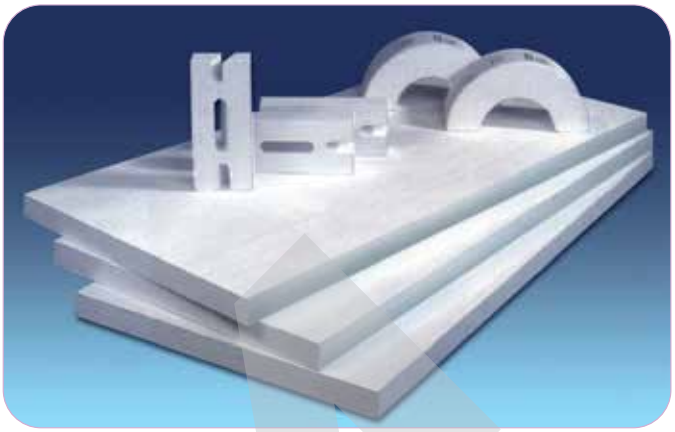
Calcium Silicate (Ca-Si) Boards

Calcium Silicate (Ca-Si) plates are asbestos-free insulating materials. They are mainly used as back up insulations for heavy refractory bricks or castable combinations. Low thermal shock resistant avoids them to be used in working line insulations.



Advantages and Properties

- Low thermal conductivity.
- Low thermal shrinkage.
- Low density.
- Contains no sulphur, trace amount of iron.
- Resistant to protective gases (CO, NH_3, H_2 and CH_4).

Main Properties	
Classification Temperature, °C	1000-1100
Colour	White
Density, kg/m^3	240
Cold Crushing Strength, N/mm^2	1,4
Shrinkage, % (12 hours at 1000°C)	1.3
Coefficient of Thermal Expansion, m/m.K	5.4x10^{-6}
Specific Heat, kJ/kgK	1.03
Thermal Conductivity, W/m.K	
200 °C	0.07
400 °C	0.10
600 °C	0.14
800 °C	0.17
Protective gases that the material resist	CO, NH_3, H_2 ve CH_4
Chemical Composition, %	
SiO_2	44-45
CaO	43-44
Other Alkalis	0,2
Loss on Ignition, %	11,5

Machining

Ca-Si slabs are easy to machine, without any harmful powders for human health.

Applications

Calcium silicate products with board and tube forms which have high thermal and mechanical strength properties are available for back up insulation.

- Iron and Steel Industry: Melting, rolling and heat treatment applications.
- Ceramic Industry: Back up insulations for ceramic furnaces such as tunnel, shuttle or batch type furnaces.
- Glass Industry: Melting furnaces and cooling channels.
- Cement Industry: Heat exchangers, mixers, calcination furnaces.
- Chemical-Petrochemical Industry: Thermal shattering reactors and machining units.
- Aluminium Industry: Melting, holding furnaces and back up insulation for launders.

The values given herein are typical average values obtained in accordance with standard test methods and subject to normal manufacturing variations. They are supplied as technical data and may change without notice. Contact our company to obtain detailed info.