

# CALCIUM SILICATE PIPE SUPPORT

## Description

Rockal Calcium Silicate Pipe Support Insulation made from tobermolite ( $5\text{CaO} \cdot 6\text{SiO}_2 \cdot 5\text{H}_2\text{O}$ ) crystal reinforced with non-asbestos fibers. It is a rigid material exhibiting high compressive strength, low shrinkage value and low thermal conductivity, high heat resistance at high service temperature. It is non-toxic and chemically stable.

It is known as the stability in different temperatures, asbestos-free, non-corrosive to stainless steel and maintain high thermal insulation properties even at  $650^\circ\text{C}$  Type I and  $1000^\circ\text{C}$  Type II. It is widely used in power plants, petrochemical plants, pipeline systems equipment, as well as heating pipe network system.

### Primary Uses:

Rockal Calcium Silicate Pipe Support It is widely used in power plants, petrochemical plants, pipeline systems equipment, as well as heating pipe network system.

## Advantages:

### • Asbestos Free

Made from algaous fossil from hundreds of millions of years ago, the product is entirely asbestos-free and non-poisonous to human body.

### • Good Anti-corrosion

The super low chloride ion content and alkalescence have good protection for metal pipes, which greatly prolongs the service life of pipes and equipment and greatly reduces maintenance cost, bringing lasting protection and better durability.

### • Good Stability

Long time soaking in water will not lead to pulverization Various performance remains stable after drying.



### • Superior Strength & Super-Light Weight

With similar density, the strength of this material is the highest among all the inorganic rigid insulation materials with better compressive performance and is not easy to bend. It's density and coefficient of thermal conductivity are lower which can create better heat insulation effect.

### • Durable seal against air leakage

The product passed the ASTM E 84 test standard and has been identified as non-combustible material. It also passed the Testing of Fire Building Materials which identifies it as Class A (Class-1) non-combustible material.

### • Wonderful Non-combustibility

### • Excellent Soundproofing Performance

Great soundproofing effectively reduces industrial noises.

## Application

- Pipeline Facilities in Petroleum Refinery Chemical Industry,
- Oil Tank Insulation & Hydroelectricity
- Nuclear Power & Thermal Power
- City Heat Supply Network Insulation
- Kitchen Duct & Exhaust Insulation
- Curved Slabs for Vessel/Equipment Insulation
- Wall Insulation, Insulation Slab
- Engine Exhaust Insulation & Hotline Insulation
- Thermal Support Inserts

#### Standards:

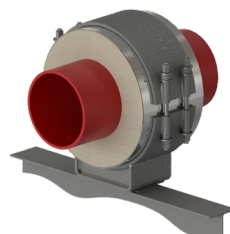
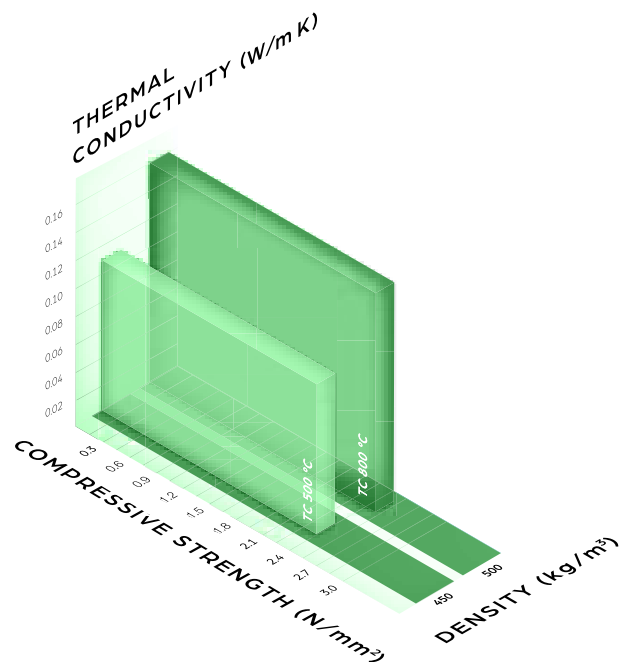
- ASTM C 518
- ASTM C 203
- ASTM C 356
- ASTM C 533
- ASTM C 421
- ASTM E 84

## Technical Specification

### • Thermal Conductivity

Temperature (°C)	Type I (W/m.k)	Type II (I (W/m.k))
25	0.052	0.058
50	0.060	0.065
93	0.065	0.070
149	0.070	0.075
200	0.078	0.085
260	0.087	0.092
300	0.095	0.098
371	0.102	0.105
400	0.106	0.109
500	0.110	0.115
538	0.111	0.127

- Graph: Thermal conductivity vs. compressive strength vs. density



### • Physical Properties

	Type I	Type II
Nominal Density (Kg/Cu.m)	220	220
Linear Heat Shrinkage (%)	≤ 2.0	≤ 1.3
Flexural Strength (MPa)	≥ 0.344	≥ 0.631
Compressive Stress (MPa)	≥ 0.689	≥ 0.890
Weight Loss by Tumbling (First 10 Min) %	≤ 20	≤ 20
Weight Loss by Tumbling (Second 10 Min) %	≤ 40	≤ 5.6
Hot Surface Performance %	0.25'(6) (No Through Cracking)	0.25'(6) (No Through Cracking)
Surface Burning Characteristics	0	0
Moisture Content %	≤ 20	≤ 5
Non-Combustibility Properties	Pass	Pass
Chloride Content	–	–
Ozone Depletion Potential (ODP) Value	0	0
Global Warming Potential (GWP)	0	0