THE ISOLATOR
NOVEMBER 2020 – VOL. 22

INSIDE THIS ISSUE

THE ISOLATOR

Welcome to the December edition of the Isolator, the monthly newsletter from Kinetics Middle East LLC. On behalf of everyone in KME, hope you are well, safe and productive during this pandemic. In this edition, we'll be exclusively talking about **Calcium Silicate**, a new product added to our range for thermal isolation.

We'll look into its application at Ministry Buildings in Cairo, Egypt. We'll get to know more about Calsil history, its applications, safety, etc….

Enjoy reading it as much as we enjoy creating and sharing it with you.

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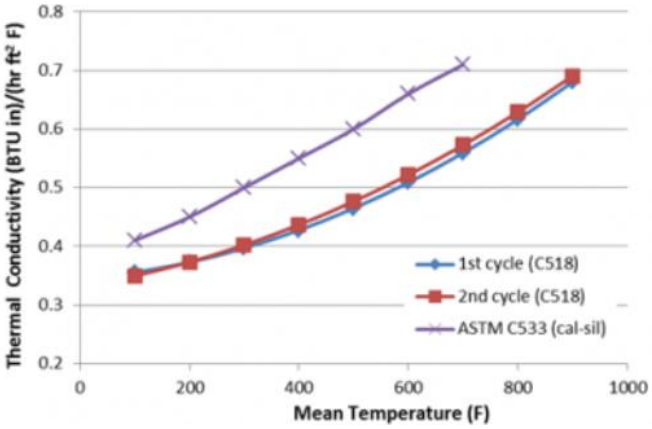
MINISTRY BUILDINGS, EGYPT

PROJECT UPDATE

The Ministry Buildings in the New Administrative Capital is built upon 170,000m^2, The project includes 10 ministerial complexes with a total of 34 ministries, in addition to the Cabinet Presidency building, the Parliament building and the main axis in the middle of the ministerial buildings.

The concrete structure of the Main building is finalized and will be finished and equipped according to the highest standards of Modern Governmental Buildings.

Kinetics Middle East was engaged by M/s.Gama Construction, the MEP Contractor of the project to supply Calcium silicate thermal insulation as pipe sections to insulate CHW piping at support locations.



Specification Compliance	
ASTM C533, Type I Material Standard	Meets or Exceeds All Test Methods
ASTM C302/C303 Dry Density	<13 lbs. per cu. ft. (208 kg/m3)
ASTM C165 Compressive Strength	>220 psi @ 5% strain (1517 kPa)
ASTM C203 Flexural Strength	>80 psi (551 kPa)
ASTM C356 Linear Shrinkage	<1.0% after 24 hr. soaking heat @ 1200°F (650°C)
ASTM C447 Max Service Temp	1200°F (650°C)
ASTM C421 Abrasion Resistance	Weight Loss by Tumbling <10% after 10 minutes
ASTM C692/C871/C795 Corrosion Tests (Stainless)	Passes
ASTM C1617 Mass Loss Corrosion (Ferrous)	Passes <DI Water Control
ASTM E136 Non-Combustible	Passes
ASTM E84 Surface Burning Properties	Flame Spread - 0 Smoke Developed - 0

CALCIUM SILICATE – THERMAL INSULATION

PRODUCT HIGHLIGHT

* Superior resistance to breakage and physical abuse during fabrication, shipping and installation.

* Fast and easy installation.

* Low density below 230 Kg/m3, low thermal conductivity & high durability.

* Large selection of size & Forms, reduces joint and keep thermal insulation performance well.

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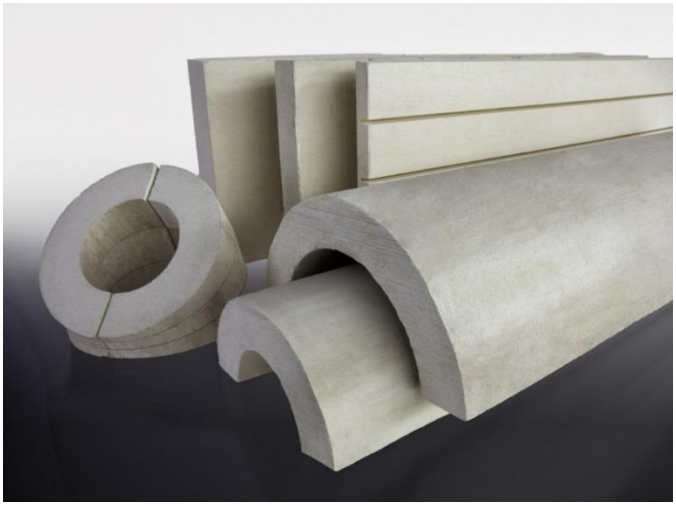


Brief History of Calcium Silicate Insulation, Applications & Safety

Calcium silicate, sometimes referred to as “Calsil”, first evolved about 1950 from two earlier types of high temperature thermal insulation: 85% magnesium carbonate and pure asbestos insulation. When first developed, calcium silicate insulation was typically reinforced with asbestos fibers. By the end of 1972, manufacturers had switched the reinforcing fibers to glass fiber, plant fibers, cotton linters, or rayon.

When industrial facilities operators started asbestos insulation abatement programs in the 1970s, asbestos-free calcium silicate was widely used as the replacement material. It came to be used on piping and equipment at oil refineries, petrochemical plants, power plants, steam distribution lines, and for other high temperature applications requiring a high-strength insulation material.

Applications

Because of its high compressive strength, low thermal conductivity and corrosion inhibiting properties, it’s the preferred product for application on high temperature piping, duct & equipment. It’s specially recommended for use in Petrochemical and Power generation industries. It is manufactured and sold in three different forms: preformed block, preformed pipe & and board.

Available Forms and Sizes

Normal Pipe Sizes		Insulation Thickness	
in.	mm	in.	mm
½-126	23-3200	1-3	22-75

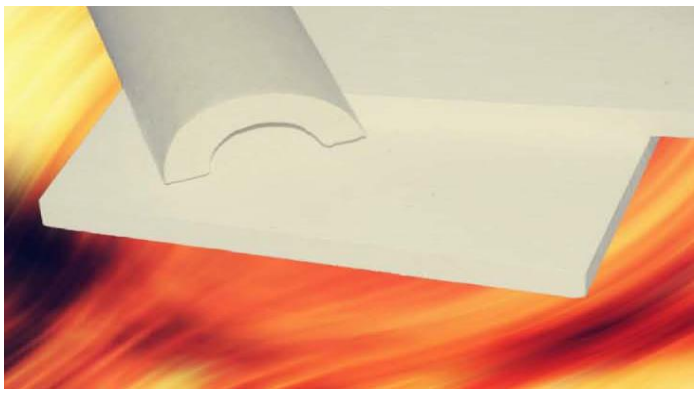
Flat board Width		Insulation Thickness	
in.	mm	in.	mm
6	150	1-4	25-100
12	305	1-4	25-100
24	152	1-24	25-152

Safety

Operating Temperature Limit : 1200 °F (650 °C)

Fire Safety: It provides consistent thermal performance at high temperatures to protect plant workers from burn injuries. Non-combustible insulation when tested in accordance with ASTM E136.

Calsil withstands direct flame impingement, 0 flame spread and 0 smoke developed per ASTM E84.



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