SioTherm

Effective Thermal Insulation And Fire-Protection

February 2020

SioTherm

About SioTherm

SioTherm is a porous silicate material for **thermal insulation and fire-protection** of industrial equipment surfaces (furnaces, ovens, boilers and heat-exchangers) and technological pipelines.

SioTherm range includes 3 products:

- **SioTherm Panel** – flat panels of custom thickness
- **SioTherm Shell** – semi-cylindric shells of custom sizes
- **SioTherm Freeform** – for complex shape solutions

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About SioTherm

SioTherm Freeform is used for **plumbing fitting** thermal insulation.

It is supplied as 2 separate components
that have to be mixed right at a construction site
or industrial facility and shaped directly on the fitting.

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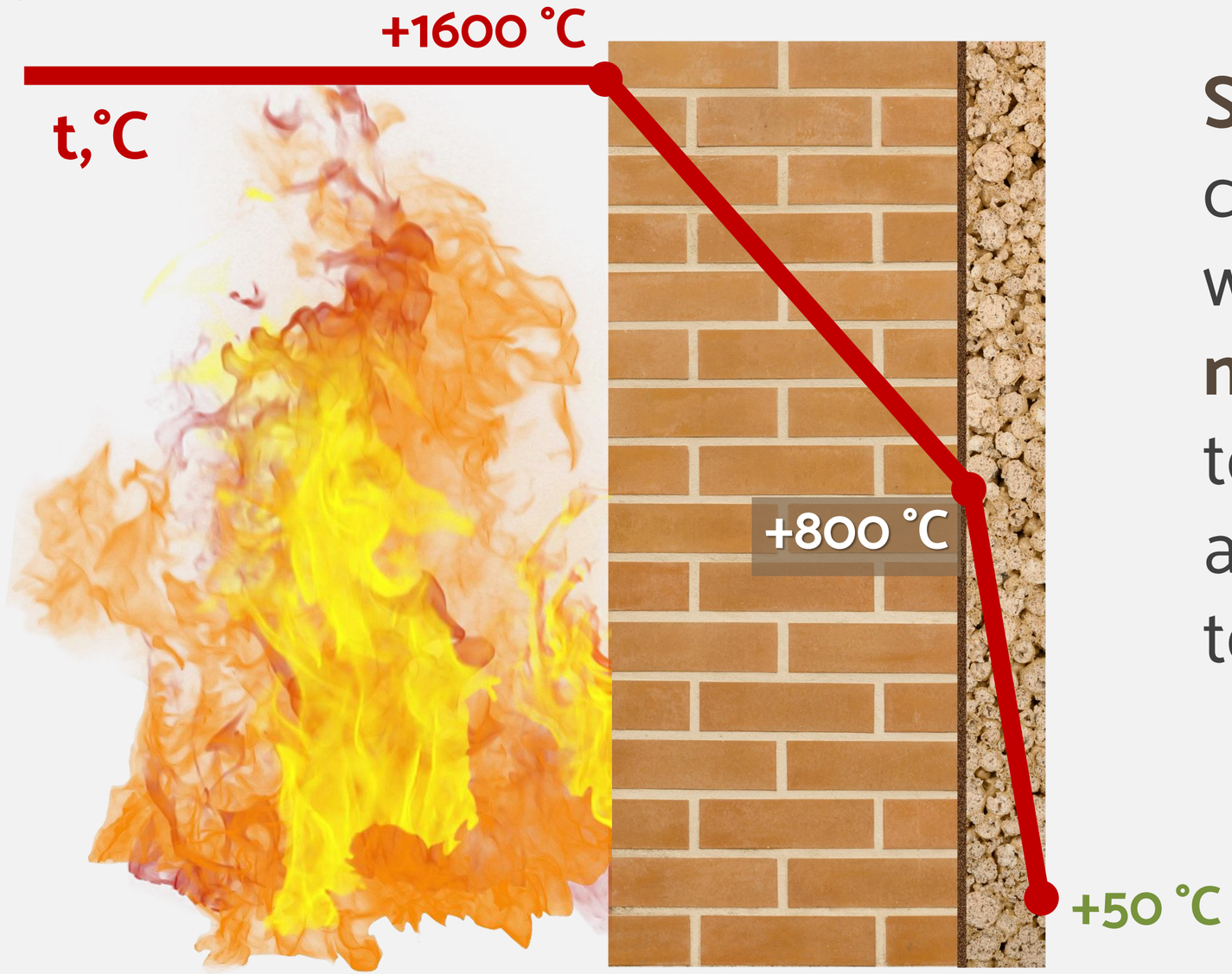

About SioTherm

SioTherm Panel combined with **refractory materials** to provide safety at even higher temperatures

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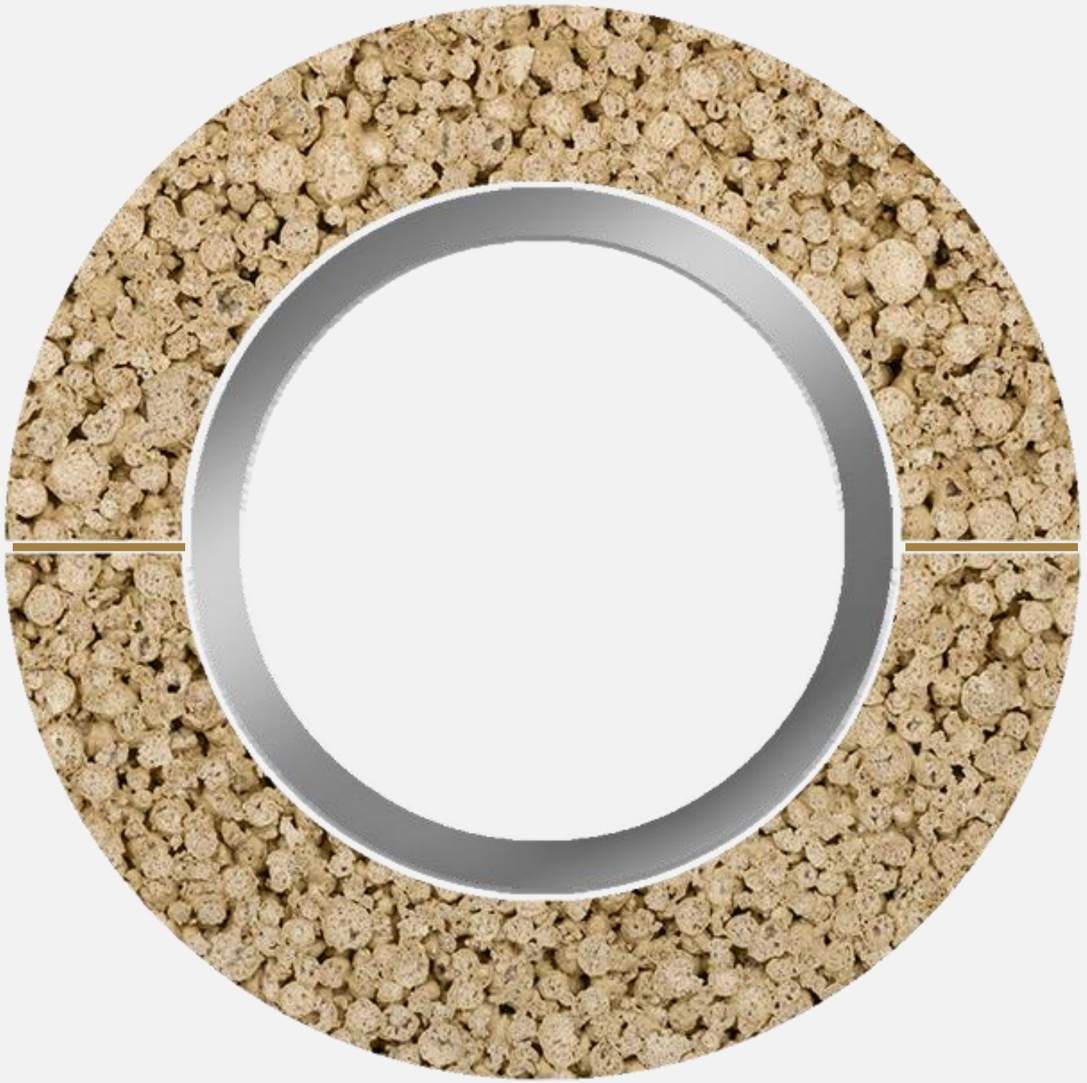

SioTherm Shell
applied to pipeline –
2 semi- cylindric shells
glued with **SiCoat**
expanding glue

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About SioTherm

SioTherm Shell
combined with
SioTherm Freeform
to protect hot pipeline

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Properties

- **Low density** of 90-120 kg/m^3
- **Low thermal conductivity** (λ=0.045 W/m °K at 20 °C)
- Working temperature range: -50 °C to +800 °C
- **Non-combustible** (European Class A1)
- **Zero-emission** (European class E0)
  even at high temperatures and during the fire
- **Fiber-free**

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Properties

- **Waterproof**, moisture-proof, acidproof and greaseproof
- **Stable form** and **no shrinkage** during the operation period
- 100% **Non-organic**
- 100% **Recyclable**

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Why SioTherm?

All the countries have their special **personnel safety requirements** – the surface temperature of hot equipment and pipelines insulation has to remain within 50 °C.

Another crucial requirement is the **reduction of CO_2 emission** and **loss of heat** accordingly.

Most of the existing solutions have very low working temperatures. Foam plastics like EPS, XPS and PUR work in the range of +80 °C to +150 °C.

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Why SioTherm?

Mineral fiber mats and panels have a working temperature of +600 °C.
Yet over time they are affected by shrinkage, lose their shape
and insulation layer thickness. Formaldehyde emission is yet another issue.

Expensive light refractory materials usually have to be used
for a working temperature range of +500 °C to +800 °C.

SioTherm can be used as **self-sufficient**
separate thermal insulation for temperatures **up to +800 °C**
or combined with other refractory materials
to **reach even higher temperatures**.

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How Does It Work?

SioTherm is produced of **SioPor** porous granules
bound with the expanded silicate binding.

This creates **fractal porosity** through the volume of the material
and multiple chambers of air deliver
outstanding thermal conductivity properties.

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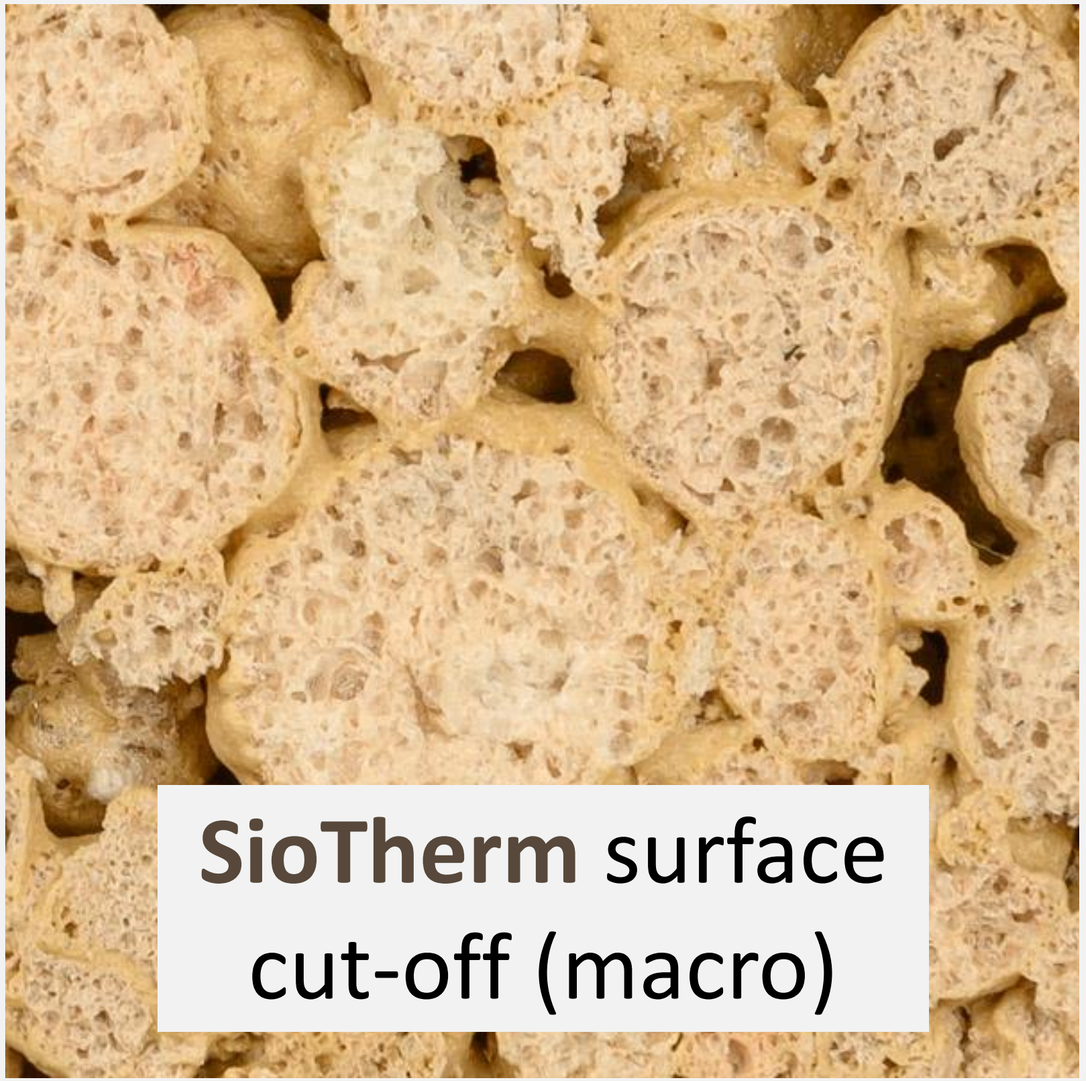
How Does It Work?

SioTherm surface



SioTherm surface cut-off (macro)

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Contacts

Visit our website to see info
about our products and solutions:

https://si-tech.solutions/siotherm

Visit our YouTube channel
for all product demo videos:

https://tinyurl.com/Si-Tech

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