SioPor

Effective Non-organic Thermal Insulation Material

February 2020

SioPor

Effective Thermoinsulation

SioPor is effective non-organic thermal insulation material in the form of porous spherical granules.

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Applications

- **Thermal insulation aggregate** for attics, roofs, wooden floors, decks and walls
- Aggregate **for extra-light macroporous concretes** (300-400 kg/m^3)
- Small fraction is used as filler **for lightened (insulating) plasters**
- Aggregate for **SioTherm thermal insulating shells and panels**
- Aggregate for **SiDeck acoustical ceilings**
- Filler for **thermoplastic polymers**

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Applications

Macroporous
extra-light concrete
with **SioPor**

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Applications

Surface of **SiDeck** acoustical ceiling

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Applications

Surface of **SioTherm** insulating panel or shell

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Properties & Characteristics

- 100% **Non-organic**
- **Extra-low bulk density** of 50-70 kg/m^3
- **Low thermal conductivity** (λ=0.038 W/m °K)
- Perfect **sound insulation**
- **Non-combustible** (European Class A1)
- **Zero-emission** (European class E0)
- **Breathable** and vapor-permeable

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Properties & Characteristics

- **Waterproof**, moisture-proof and acidproof
- Prevents formation and growth of **mold/mildew/fungus**
- **Inedible** – insect-proof and rodent-resistant
- **Durable**, no shrinking deformation during the operation period
- 100% **Recyclable**

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Why SioPor Is So Efficient?

Most of the porous
granulated materials
get a hard surface shell
during the production process.

As a result –
the smaller is the granules size
the higher is their bulk density
and thermal conductivity.

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Why SioPor Is So Efficient?

SioPor is different:

- It has an **even porosity of 95%** through
- This allows reaching an **extra-low bulk density** of 50-70 kg/m^3
- **SioPor** has a **fractal porosity** combining large, small and micro pores
- This results in perfect **sound insulation** and **thermal conductivity**
- Chemically **SioPor is close to the glass**
- **SioPor** granules surface **can get heat tempered** if needed

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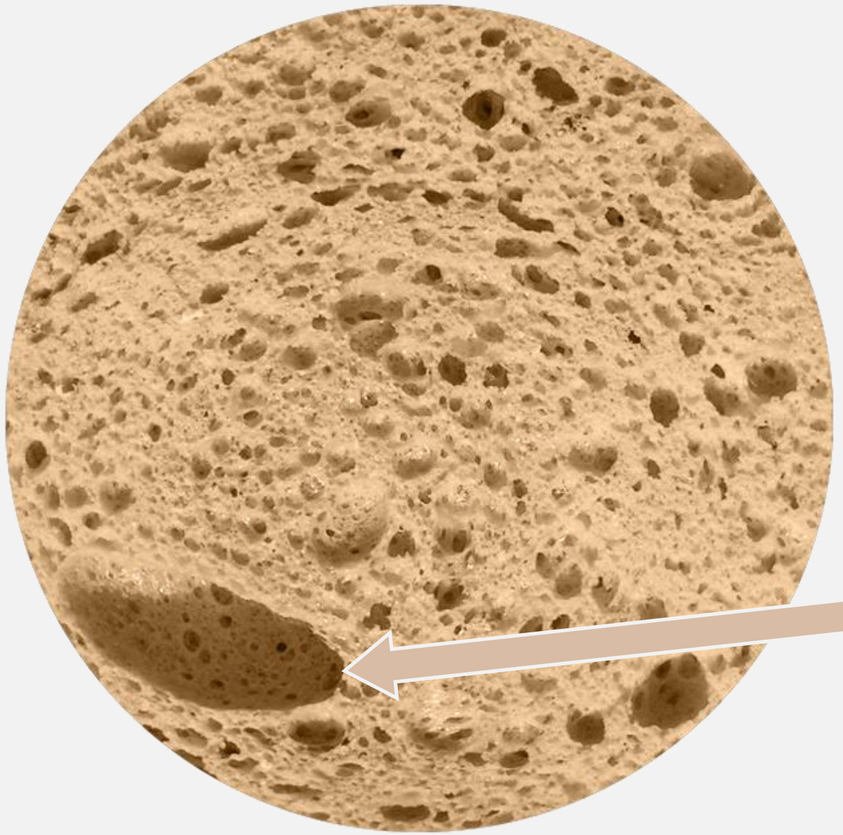
Why SioPor Is So Efficient?



Fractal porosity

Macro shot of the porous structure of one expanded **SioPor** granule.

Each granule has a diameter of 3-9 mm.

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Production

- **SioPor** is produced using very compact **energy-saving low temperature** (300 °C) technology
- As a result, the production has a **very low CO_2 emission**
- The production line for expanding 80 000 m^3 of **SioPor** a year requires 300 m^2 of production space
- The **production line for SioPor** expanding from semi-product is very **simple and reliable** – like a popcorn machine.

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Contacts

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

https://si-tech.solutions/siopor

Visit our YouTube channel
for all product demo videos:

https://tinyurl.com/Si-Tech

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Contacts

EU and USA: Mr. Egon Doeberl

Mobile: +43 (0) 676 7781215 **Phone**: +43 (0) 79 42 778 11-10 **e-mail**: egon.doeberl@thermotec.eu

Eastern Europe and Asia: Mr. Illarion Eine

Mobile: +38 (0) 67 466 3734 **e-mail**: illarioneine@gmail.com **Skype**: illarion.eine

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