



SiTech

Caring For The Environment

Family of Innovative Silicate Products

February 2020





About SiTech

SiTech is a family of **innovative silicate products** with wide range of applications – from construction industry, chemical and aircraft manufacturing solutions to agriculture.

All products are based on our unique **sodium/potassium hydro-silicate hard gel** with content of **chemically bound water up to 20%** by weight.

All **SiTech** products are inspired by nature – they are **safe, wasteless and 100% recyclable**.

- ▶ **SioPor** – effective non-organic **thermal insulation** granules
- ▶ **SiCoat** – effective all-purpose **intumescent fire-protection** material
- ▶ **SioTherm** – innovative **thermal insulation and fire-protection** for industrial equipment and pipelines
- ▶ **SiBrick** – innovative solution for effective **structural ceramics**
- ▶ **SiDeck** – revolutionary commercial **acoustical ceiling tiles**
- ▶ **SiAgra** – innovative solution for **non-productive/arid lands**

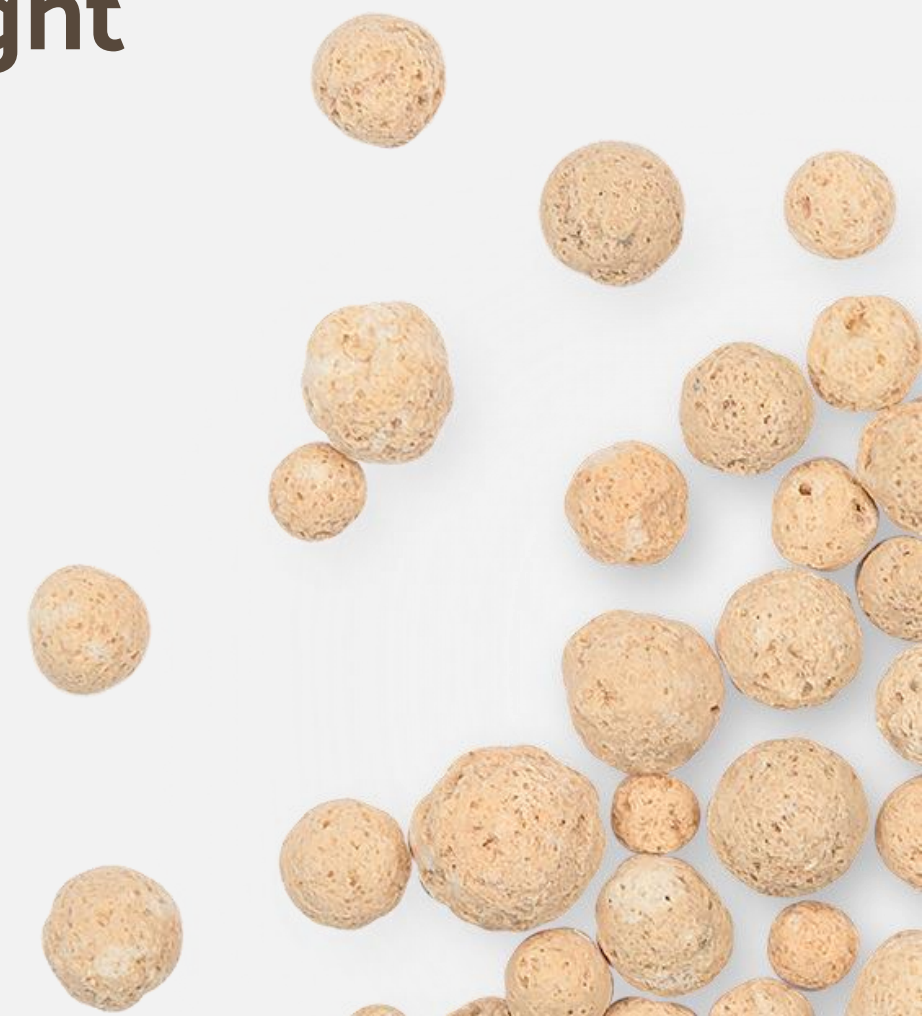


SioPor is effective non-organic **thermal insulation material** in the form of porous spherical granules.

SioPor can be used as thermal insulation **aggregate** for attics, roofs, wooden floors, decks and walls. As an aggregate **for extra-light macroporous concretes** (300-400 kg/m³).

Its small fraction is used as filler for **lightened plasters**.

SioPor is also used as an aggregate for **SioTherm** thermal insulating shells and panels and **SiDeck** acoustical ceilings.





SiCoat is effective all-purpose **intumescent fire-protection material** that can be used for **fireproofing of construction elements** (pillars, girders, doors, air ducts, cable conduits etc.) made of steel, wood, concrete, polymer, composite materials etc.

SiCoat allows **improving the flammability class** of polymers or reaching almost **any fire-resistance rating**.





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

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





SiBrick is an innovative solution for **effective structural wall ceramics**.

We fill the gaps in ceramic blocks with porous silicate material **SioTherm** that has very **low thermal conductivity**.

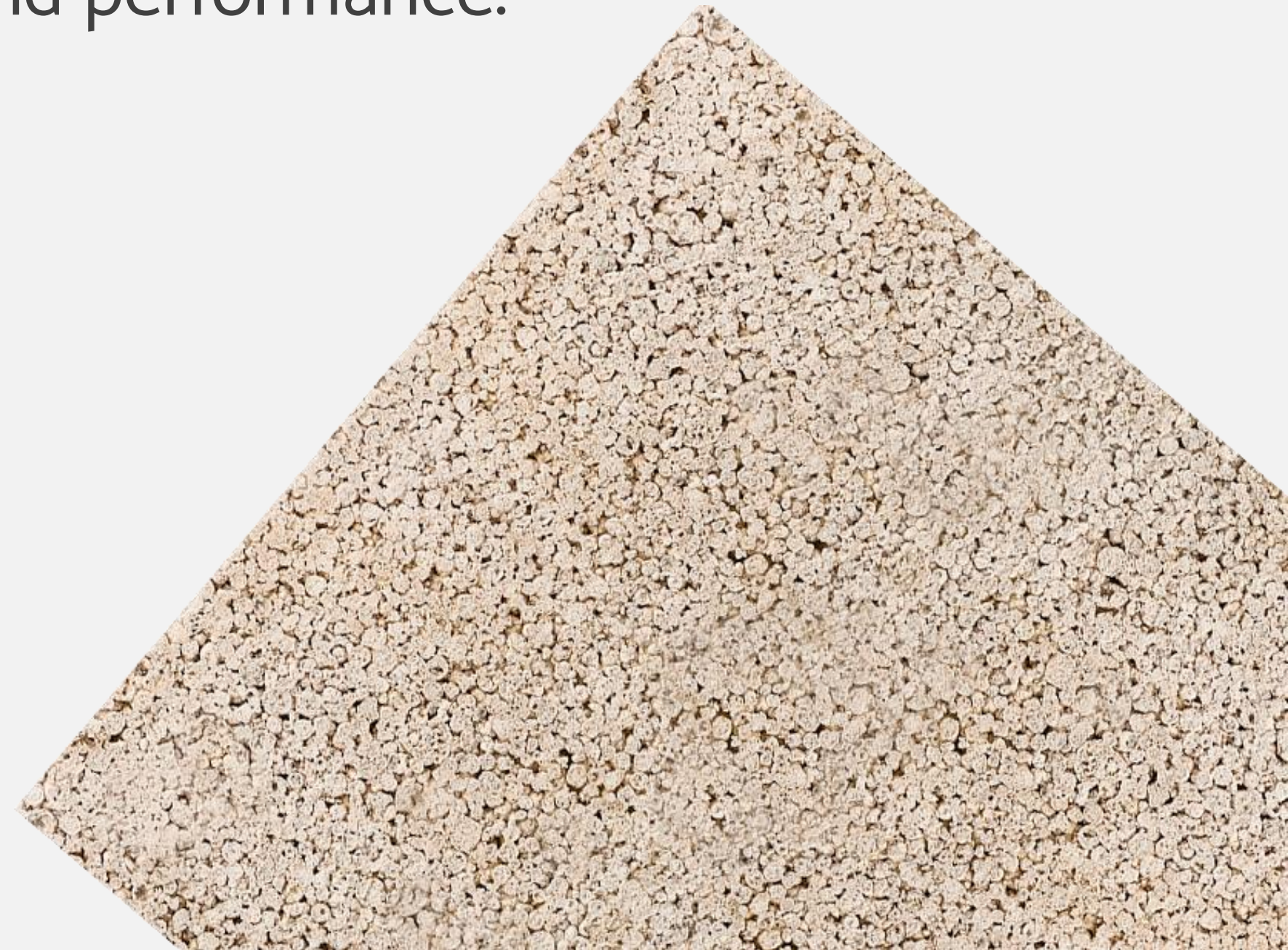
SiBrick technology allows the production of large ceramic blocks that have a lot of advantages towards ones filled with perlite or mineral fibers absolutely avoiding their disadvantages.





SiDeck is an innovative solution for commercial **acoustical ceilings** with unique outstanding characteristics and performance.

SiDeck has excellent **sound absorption** and it is absolutely **non-combustible**, 100% **non-organic** with **zero-emission**, it is moisture- and **waterproof** and 100% **recyclable**.





SiAgra is an innovative solution allowing **improving yields of agricultural crops** and including or returning non-productive, infertile, arid and sick soils to agriculture.

SiAgra is a **nanomaterial** based on potassium hydro-silicate hard gel, amorphous silica and organic acids.

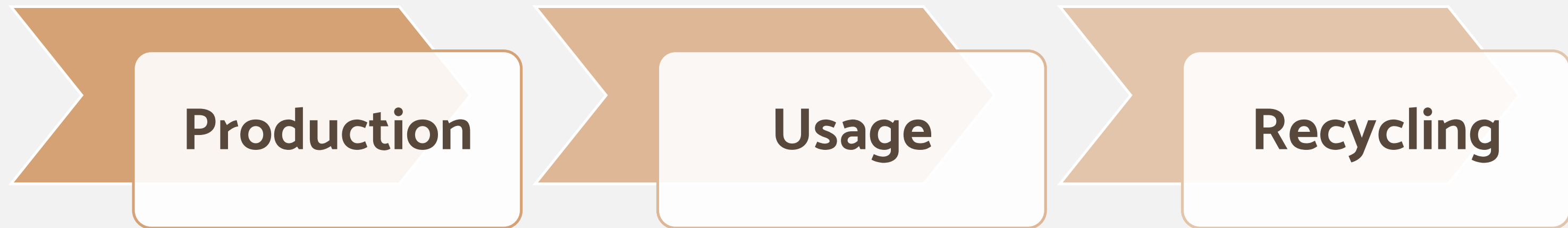
SiAgra is a **perfect growing medium** for developing **artificial soil** based on sandy ground.






Environmental Care

Environmental care is our top priority at all the stages of our products' life cycles.



Our products and technologies contribute to environmental care and provide numerous innovative solutions for **ecologically responsible operations**.

- ▶ Using **widely available** and **affordable** amorphous silica earth as raw material for all the **SiTech** products
- ▶ **Low CO₂ emission** in production of **SiCoat** and **SiAgra** due to utilization of exothermal heat in the technology
- ▶ **Low CO₂ emission** during **SioPor**, **SioTherm**, **SiDeck** and **SiBrick** expanding as the technology requires just 300 °C
- ▶ **No organic solvents** are used during SiCoat production
- ▶ The technology is **wasteless, no pollution**, no effluents, no solid waste, no air pollutant emission

- ▶ **SioPor, SioTherm and SiBrick** are **effective thermal insulating** materials. Using them in construction and industry allows significant **saving of heat** and need in further **energy consumption** and as a result – **lower CO2 emission** during the whole cycle of operations.
 - ▶ All **SiTech** products are safe, **fibreless** and have **zero-emission**
 - ▶ Using **SiAgra** allows including/returning non-productive, infertile, arid and sick soils to agriculture and to **reduce the greenhouse effect**
 - ▶ **SiAgra** allows **improving yield of energy crops** and reduction of burning irreplaceable fossil fuels
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Recycling

- ▶ All **SiTech** products are **100% recyclable**
- ▶ **No hazardous waste** during recycling of **SiTech** products

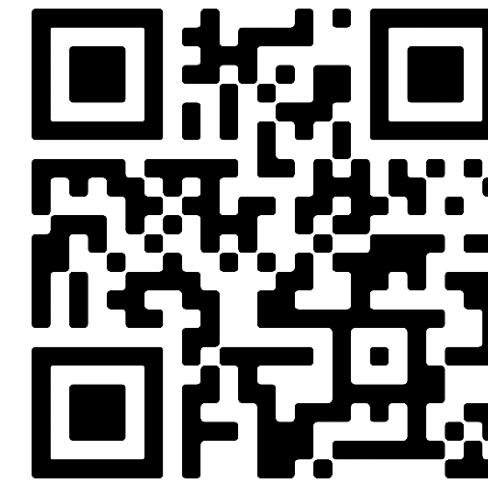




Contacts

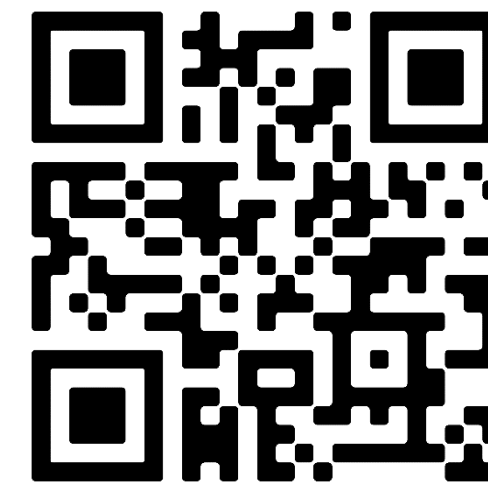
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<https://si-tech.solutions/sibrick>



<https://si-tech.solutions/sideck>



<https://si-tech.solutions/siagra>



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