

Si-X THERM

A New Generation Of Insulation Boards

January 2023



Modern construction became more ecologically responsible and new norms and trends require buildings to be:

- || **Safe** (fire-resistant, no emission of toxic elements, biostability)
- || Have a **low carbon footprint**
- || **100% recyclable** after the building life cycle ends
- || **Environmental friendliness** of all the materials used

Sustainable construction is a **growing trend** in the world, but insulation materials still drop behind other segments because of the lack of relevant materials and solutions available so far.



About Si-X THERM

Si-X THERM is a new generation of insulation materials (boards) based on our patented **non-organic binder Si-X BINDER** using **wood wool**.

Si-X THERM is fully compliant with modern norms for **sustainable ecological construction.**



Si-X THERM is an advanced solution for modern construction as it is:

- Assigned to construction material **B1, s1, d0 according to norm EN 13501-1 – flame retardant**
- Zero-emission** (does not contain formaldehyde)
- Biostable:** rodents, insects, termites, mold, mildew, fungus resistant
- 100% Recyclable**
- Negative Carbon Footprint** (-133.7 kg eCO₂/1m³ Si-X THERM)
- Density of **80-120 kg/m³**
- Thermal conductivity **$\lambda=0.035-0.04$ W/m*°K**



Si-X THERM

Si-X THERM is equal or better than mineral wool products in terms of density and insulation, while **Si-X THERM** is solid, **self-extinguishing**, contains **no formaldehyde** and is **100% recyclable**.

Si-X THERM fibers 3-D interweaving enables form stability and mechanical strength

Insulation Boards

Insulation
board of woodwool





Si-X THERM vs. Mineral Wool

Replacing mineral wool with **Si-X THERM** is a shortcut to the **decarbonization** of the economy and industry.

The current consumption of mineral wool in Europe is about 70 million m³.

Replacing just **10%** of this market (about 7 million m³) with **Si-X THERM** can **reduce carbon footprint by 6.4 million tonnes of eCO₂**.

Replacing other insulation materials (e. g. ESP) with **Si-X THERM** can significantly **improve the decarbonization** process.



Insulation Boards

Si-X THERM is targeted to ecological or **organic construction**.

This market is growing worldwide, but it clearly misses the effective **insulation material that would meet all the requirements** of sustainable green building.

The market has a **latent demand** for materials like **Si-X THERM** and launch of it can **boost the market** itself.



Binding Agent

Si-X THERM is based on our patented **non-organic silicate binder SI-X BINDER**, also used as **fire-protecting** glue.

This allows **even and smooth application** to the surface **without absorption** by wood wool fibers.





Recycling

Si-X THERM is **100% recyclable** itself and allows using affordable wood materials.

Si-X THERM can be **reused**.

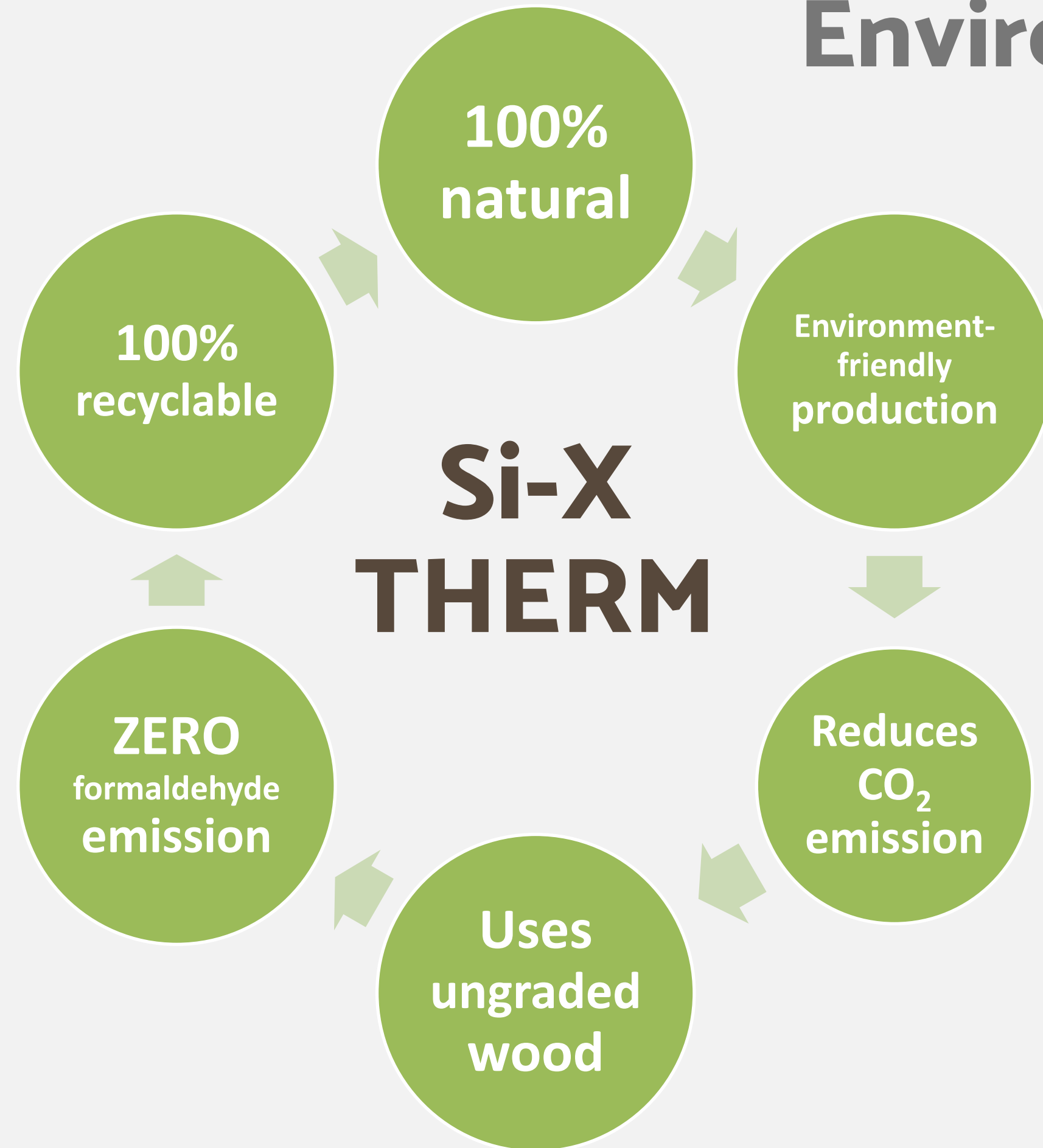
After grinding and processing it can be used in the production of new **Si-X THERM** panels.

No hazardous waste is produced during recycling.





Our **360° environmental** concept makes **Si-X THERM** a perfect solution for modern **sustainable** construction focusing on **safety and ecology**



Environmental Care



Environmental Care

CO₂ emission reduction

Si-X THERM can replace existing materials that require high energy consumption during the production process.

Having a **negative carbon footprint** **Si-X THERM** can significantly contribute to the **decarbonization** of the economy.





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