

# It's that Easy.

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eco speed

## Thermozell



## Frequently Asked Questions

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# Product Types

## **Thermozell levelling compound**

Used to compensate for height tolerances, as well as covers the installation and drainage pipes, which are usually laid directly on the raw ceiling.

Thermozell thermal insulation lightweight concrete enables screed and tile layers to produce a floor structure quickly, economically and in compliance with norms.

In case of dismantling, coherent parts can be taken out and crumbled back into grains due to the material's property.

The material is not self-leveling and is pumpable max. 60-80 m (depending on the machine technology).

Depending on the applications, you can choose from the following types:

## **Thermozell 160**

For applications where good thermal insulation is required, such as attic insulation, sloped concrete, basement insulation or as insulation for walls in contact with the soil.

## **Thermozell 250**

For applications where good thermal insulation is required, such as attic insulation, sloped concrete, basement insulation or as insulation for walls in contact with the soil.

## **Thermozell 400**

For applications with higher pressure loads, such as subfloors for industrial halls and frost cases (from 20 cm) for roads and parking lots. Thermozell 400 is non-combustible and complies with fire class A2 according to DIN EN 13501-1.

### **What is Thermozell eco?**

Thermozell eco is a factory-premixed, cementitious levelling compound with the addition of refined EPS granulate in an 80 liter bag. Only the addition of water creates a load-bearing levelling compound with excellent insulating properties.

### **What is Thermozell pro?**

Thermozell pro enables fast, standard-compliant and economical production of a floor structure and consists of refined EPS granulate in 200 liter bags. Mixing with the addition of cement and water takes place directly at the construction site.

### **What is the difference to speed products?**

The difference lies in our various additives. In the case of eco/pro, these lead to readiness for covering after approx. 10 days.

With eco speed/pro speed, this occurs within approx. 24 hours (depending on installation thickness, ventilation and ambient temperatures).

# Processing and Application

## **For what purposes and how can Thermozell be used?**

Thermozell can be used in various applications, such as: height compensation, installations, beam ceilings, slopes, substructures, screeds, tile coverings, underfloor heating, backfilling, walls, ceilings, pools, and more.

## **Which cement can be used for the Thermozell pro/pro speed?**

By adding different amounts of cement, the product types Thermozell pro speed and pro 600/400/250/160 with their respective properties and application possibilities arise. Commercially available cement (e.g. CEM 42.5 N/R, CEM 32.5 N/R) or special cement or binders for the production of bonded levelling compounds can be used for mixing.

## **How is Thermozell mixed?**

Thermozell Pro speed/pro is first mixed with the amount of cement required to produce the respective product type.

This step is not necessary with Thermozell Eco speed/Eco, as the cement is already mixed in at the factory.

First mix the dry mixture thoroughly to achieve an even distribution of the binder. The mixture is then mixed again thoroughly while slowly adding the specified amount of water until a homogeneous and earth-moist consistency is achieved.

To begin with, mix with the minimum amount of water as specified and, if necessary, additional water can be added in accordance with the mixing instructions to achieve the required moisture content.

### **Does Thermozell have to be compacted?**

Thermozell does not have to be compacted. The mix only needs to be levelled with a levelling rod. 1m<sup>3</sup> of Thermozell results in 1m<sup>3</sup> of finished levelling compound. When properly installed, there is no post-compaction or settlement.

### **What minimum fill height is required? Can I also pull Thermozell down to 0mm?**

According to our European Technical Approval (ETA), the minimum fill height is 30mm.

Thermozell cannot be stripped to 0mm.

If you need to level to 0mm, it is possible to install Thermozell up to a height of 30mm and then level the height from 30mm to 0mm with a levelling filler.

### **When is Thermozell ready for covering?**

Before installing the rest of the floor structure, the levelling layer must be sufficiently dry. To determine the residual moisture, the CM measurement has proven itself.

The residual moisture should not exceed 12 %.

Ready for covering is achieved with:

- eco speed or pro speed after approx. 24 hours, depending on <12% CM measurement/building climate).

The readiness for covering of approx. 24 hours is based on the assumption of 20 C° room temperature & 65 % humidity

- eco or pro after 10 days

### **How can the residual moisture be determined?**

In practice, the CM method has proven itself: The initial weight is 10 g from the entire cross-section. At a pressure indication of max. 1.2 bar, readiness for covering is given.

This means a residual moisture of 12 %. On our product pages of the eco-series and pro-series you will find detailed instructions on how to do the CM measurement:

<https://thermozell.hirsch-gruppe.com/en/eco/>

<https://thermozell.hirsch-gruppe.com/en/pro/>

## **Are pipes, routes and ducts in the installation level permitted to be filled with Thermozell in accordance to DIN 18560-2?**

Thermozell eco speed / eco 250 and pro speed 250 types reliably meet the minimum compressive strength of 100 kPa at 10 % compression in accordance with DIN EN 826 and can be combined with other leveling layers. If several leveling layers are used next to each other, ensure that they have the same stiffness. In addition, care must be taken during installation to ensure that the insulation board layer is not undermined and the height of the layer must be flush with the respective insulation board layer.

## **Can Thermozell be used in conjunction with metal pipes?**

Aluminum-laminated pipe insulation is not suitable for use in cement-bound fills. The valid DIN 4140 (corrosion protection) must be applied and observed accordingly.

## **... and with plastic pipes?**

We are not aware of any adverse effects with plastic pipes.

## **What is the processing time?**

- eco speed/pro speed can be processed for at least 15 min (at 20°C)
- eco/pro can be processed for at least 30 min (at 20°C)

## **What processing temperature is required?**

The processing temperature (based on air and object temperature) must be at least 5 °C (and maximum 30 °C).

## **What needs to be considered during the drying out phase?**

Thermozell must be protected from drying out too quickly, e.g. through draughts. Direct sunlight should also be avoided and the installed surface should be protected from it.

### **Can Thermozeil remain in the component after a water damage?**

After water damage with fresh water, the Thermozeil levelling compound can be dried with ventilation dryers. However, if wastewater should have entered the levelling layer, you are faced with contamination and for hygienic and health reasons the levelling layer would have to be built back in a generous radius, in the affected area.

### **Which mixing devices are suitable?**

Screed pump, truck mixer, compulsory mixer, drum mixer, free-fall mixer, mechanical mixer, mixing truck.

### **Is Thermozeil suitable as impact sound insulation?**

Thermozeil lightweight concrete has compressive strength properties and therefore does not have properties that affect impact sound. In case of appropriate requirements, an impact sound insulation board can be installed on Thermozeil in the further construction.

### **How to lay tiles/flooring on Thermozeil?**

To lay tiles/floor coverings, the Thermozeil layer must be produced as a smooth, even surface with a commercially available levelling/filling compound (the manufacturer's instructions must be observed) with a thickness of approx. 10 mm and an embedded reinforcing fabric.

Floor structure recommendation available on request.



# Sustainability

## **Is Thermozell free from...?**

Thermozell is free from HBCD (hexabromocyclododecane).  
Thermozell is free from CFCs, HCFCs and HFCs.

## **Is Thermozell QNG ready?**

The “Quality Seal for Sustainable Buildings” (QNG) is a governmental seal of the German Federal Ministry of Housing, Urban Development and Construction for buildings. The catalog of requirements for the avoidance of harmful substances (313) in building materials for insulation materials stipulates freedom from HBCD and freedom from halogenated blowing agents. The QNG seal is a prerequisite for KfW funding in new construction to achieve the sustainability class (NH). Thermozell pro speed is free of HBCD and halogenated blowing agents and is therefore QNG ready .

## **Is Thermozell suitable for DGNB or BNB certification?**

The DGNB system (German Sustainable Building Council) assesses the sustainability of buildings of various types. The system can be used for large-scale private and commercial projects as well as for smaller residential buildings. The 2023 version sets high standards for ecological, economic, socio-cultural and functional aspects throughout the entire life cycle of a building.

The Assessment System for Sustainable Building (BNB) is an instrument for the assessment of office and administrative buildings, educational buildings, laboratory buildings and outdoor facilities in Germany. It was developed by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) to reduce the ecological footprint of buildings and promote sustainable construction methods.

Thermozell pro speed can be used without restriction for DGNB or BNB certification.

## **EU taxonomie**

The EU taxonomy classifies economic activities and products according to their environmental impact. At product level, there are clear requirements for formaldehyde and volatile organic compounds (VOCs) in accordance with the EU regulation. The Sentinel Holding Institut GmbH labels qualified products that fulfil this standard. Thermozeil fulfils this standard.

We have a product passport from the Sentinelhaus Institute for Thermozeil pro speed, which proves that Thermozeil is suitable for use for DGNB and BNB certification, fulfils the requirements for EU taxonomy and is QNG-ready.

# **Storage and Disposal**

## **How should I store Thermozeil?**

The bags must be stored in a dry place and protected from sun and heat. The maximum storage time for the ready-mix Thermozeil eco speed/eco in 80 litre bags is 6 months. Thermozeil pro speed/pro in 200 litre bags can be stored for up to 1 year.

## **Where can I dispose of Thermozeil?**

For the disposal of Thermozeil lightweight concrete, please contact a recycling center/a waste collection point in your area.

If you have any questions not found, please  
contact our application engineering department



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