



FOAM GLASS AGGREGATE FOR HOUSE CONSTRUCTION

Foamit is an environmentally friendly foam glass aggregate made of recycled glass and used in housing construction. The grey-coloured aggregate is light, porous and has an angular shape. In building construction, particle sizes of 4-20 mm (Foamit 20) or 20-30 mm (Foamit 30) are usually used. The product is also available in a larger particle size (Foamit 60.0-60 mm).

METHOD OF PREPARATION

The cleaned pieces of glass cullet are milled into a powder of less than 0.1 mm powder and a foaming agent is added. In a furnace at 900 C, the glass powder mass swells fivefold.

The hardened foam glass consists of about 92% air pores. After cooling, the foam glass breaks into fragments and ready-to-use pieces.

ENVIRONMENT

Foamit is made of 100% recycled materials. Of the product, approx. 99% is made up of recycled glass and c. 1 % of a foaming agent from an industrial side stream. Foamit does not require a separate environmental permit even in groundwater areas. When dismantling structures, Foamit can be reused. Foamit has the lowest carbon footprint in its class. Foamit has been approved for the Nordic Ecolabel product database and it is possible to utilise it in houses with the Nordic swan mark.

STORAGE

Outdoor fill products are stored at the factory in outdoor storage bays and cannot be used for internal fill in houses. Internal fill products are always stored in dry warehouses at the factory.

ADVANTAGES IN BUILDING A HOUSE

Foamit's high friction angle makes it possible to operate on top of the foam glass layer during installation, as well as to build up steeply inclined layers quickly. Thus, reductions in working time and materials can be achieved.

For internal fill, Foamit increases the longevity and safety of the structure, since the product is non-combustible, sulfur-free and does not contain organic substances. Due to its low weight, good thermal insulation properties, and high freeze-melt resistance, Foamit is suitable for use as lightweight outdoor fill and for frost protection.

- Cumulative
- No organic matter or sulfur
- Lightweight
- Good thermal insulator
- High freeze-melt resistance
- Non-combustible (A1)
- Safe for indoor airspaces (M1)
- Does not leach harmful substances
- 100 % recycled material
- Smallest carbon footprint in its class

USES

Applications include in building foundations, in internal fills, for thermal insulation of upper floors (Foamit 20), in falls for roofs, frost protection, for light fill under garden decking and as backfill.

- Subfloor build ups
- Intermediate floor layers
- Superstructures
- Green roof build ups
- Sewerage systems

Foam glass aggregate can be used in all forms of foundations for building construction as an insulating and light fill material. In low-rise foundations of buildings, Foamit is used as a thermal insulator and for frost protection, as a lightweight layer and as internal fill. Foamit also acts as a capillary break in basement subfloors.

For intermediate layers of different thicknesses, Foamit is used as fill material. Foamit provides a load-bearing casting platform with minimal stress on the intermediate floor structure. Due to its structure, the product is suitable for grading floors in wet rooms.

Foamit can be used as thermal insulation in roofing structures such as in a flat roof, as well as in designing the fall. The roof fall can be carried out accurately because Foamit stays in position and withstands foot traffic even when uncompacted. In green roof build ups, it acts as drainage material. Foamit, even in a layer of soil, is not harmful to the root system of plants.

Foam glass aggregates are also well suited for yard and garden structures.

No specialist equipment is required for installation. Foamit can be used to build up all the subbase layers, on top of which a load-bearing layer and a wear-resistant layer are added. Foamit acts as a lightweight fill, for frost protection and as drainage material.

INSTALLATION INSTRUCTIONS

Foamit aggregates are typically installed by blowing or delivered in big bags. Bulk foam glass aggregates can be delivered to the building site by tipper trucks if intended for ground-based external fill.

Also, bulk foam glass aggregate for use as internal fill can be tipped onto the construction site if there is a dry tipping area for the aggregate (e.g., plywood or a sheet). Foamit can be installed in high locations with a lifting container, by blowing or packaged in big bags.

The material can be installed at the site using hand tools. If the Foamit layer needs to be compacted, a light (7,0-100 kg) vibrating plate compactor is recommended for this.

More detailed instructions can be found in the document *"Design guidelines for house construction"*.

Technical properties of foam glass aggregate

Attribute	Foamit 20	Foamit 30
Particle size	4-20 mm	20-30 mm
Particle shape	Fracture surface	Fracture surface
Density (dry)	190 kg/m ³	210 kg/m ³
Compression strength	> 0.6 N/mm ²	> 0.6 N/mm ²
pH value	10,5	10,5
Dry thermal conductivity (W/mK)	0,1	0,1
Fire class	Non-combustible (A1)	Non-combustible (A1)
Indoor air class	M1	M1
Purity	Does not contain organic substances	Does not contain organic substances
Capillary rise height	177 mm	104 mm
Carbon footprint (CO ₂ /kg)	0,31	0,31
Packaging sizes	Bulk aggregate, Big Bag(m ³) & small sack (50 l)	Bulk aggregate, B. B. (m ³)



See model drawings, design and installation instructions and other information on our website foamit.fi

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