

THE FUTURE WANTS INNOVATIONS

DIVERSE SUSTAINABILITY THROUGH
RECYCLED GLASS



SUSTAINABLE. INNOVATIVE.

LOOKING TO THE FUTURE.



THE RAW MATERIAL: used glass

This valuable secondary raw material is recycled via collection systems.

PRODUCTION: Recycled glass is finely ground, mixed with additives and sintered

Foam glass: In the foaming process at around 900 degrees Celsius, a type of foamed glass cake is created. The deliberate cooling causes stress cracks to appear in the material, which cause the large-area material to disintegrate.

Expanded glass: The green grain is sintered and inflated (expanded) in a rotary kiln. This process produces light, round grains with a closed, fine pore structure.

RED expanded glass: In an innovatively developed expansion process, a newly structured expanded glass gravel is produced in state-of-the-art continuous furnaces at a modified sintering temperature. The manufacturing process makes it possible to adapt the technical parameters of **GEOMATERIALS RED expanded glass** ballast so that it meets the high requirements of traffic loads and water storage systems.

HIGH QUALITY RECYCLED GLASS PRODUCTS

STRONG. WARM. DURABLE.

The main material properties



High Thermal Insulation

through the air spaces
enclosed in the material



Stable in Form

no shrinking or sprinkling, no settling,
dimensional stable up to 750°C



Lightweight & Load-Bearing

can be used in different ways,
load-capacity can be easily controlled



Non-Capillary

prevents moisture from rising and
percolates water, no mold



Resistance

resistant against aging, rotting,
moisture, acids, insects, rodents



Incombustible A1

non flammable,
no noxious gases



Sound-absorbing

increases the acoustic effectiveness
of building materials



Environmentally friendly

fibre- and solvent-free,
odourless, anti-allergenic,
easy to dismantle



Intelligent buoyancy behavior

water-retaining with
water-regulating properties



Dynamically resilient

significant increase in
load capacity

A MULTI-TALENT WITH MANY FEATURES.

Application: NEW BUILDING

- As loose insulating fill or bonded leveling fill between beamed ceilings, cavities and intermediate spaces or floors. It is used as a thermal separation between floor slabs and suspended ceilings.
- Floor construction with / without screed possible
- Insulation for roof constructions (e.g. flat roofs)

ADVANTAGES

- Height compensation of floors as leveling fill
- Simple covering of pipes and cable ducts
- Simple and uncomplicated to process
- Pressure-resistant floor leveling



Application: RENOVATION

- Statically resilient, thermally insulating Fill and drainage in one step
- Floor construction without floor slab - Floor renovation
- Core, vault and gradient insulation
- Drying of walls and cellars
- Thermal renovation of balconies

ADVANTAGES

- Problem-free backfilling due to the numerous small beads
- Can be pulled off at an incline
- Due to its light weight, it hardly puts any strain on old constructions
- Significant time savings compared to processing insulation boards



GEOMATERIALS expanded glass
2 - 4 mm
packed in bags or big bags

Preferred area of application:
Loose fill, bonded leveling fill,
Filling of cavities and bricks

GEOMATERIALS mineral binder
binder for expanded glass granulate
14,5 kg bag | 1 Palett = 78 bags = 1.131 kg
(dimensions: 1,20 x 0,80 x 1,60 m)

LIGHT. WARM. STABLE.

Made from recycled glass and 100% mineral.

GEOMATERIALS expanded glass are beads made from recycled waste glass, which are used for sound and heat insulation. Beam ceilings, cavities and gaps or floors. Perfect for the application of loose or bonded thermal insulation fill.

GEOMATERIALS expanded glass is a environmentally friendly and mineral alternative to conventional cement-bonded EPS fill under the screed.



MORE REASON TO FEEL GOOD.



Application: NEW BUILDING

- It is suitable for use under the floor slab as thermal insulation with and without a strip foundation
- Floor slabs with **GEOMATERIALS foam glass** are typically designed without a strip foundation
- Large-scale use in commercial and industrial properties

ADVANTAGES

- Replaces roller burnishing, cleanliness layer and extruded rigid foam boards
- As a bulk material, it is much easier and quicker to process
- Significantly lower construction height
- Moisture resistant



Application: RENOVATION

- Floor structure without floor slab with / without reinforced screed
- Floor renovation made easy with the combination of **GEOMATERIALS foam glass** and **GEOMATERIALS expanded glass**
- Vault insulation
- Drainage of walls and cellars

ADVANTAGES

- High ecological housing quality
- Open to diffusion: damp cellar walls can therefore dry out better
- Due to its light weight, it hardly puts any strain on old constructions
- resistant against aging, rotting, moisture, acids, insects, rodents



Application: GALA-CONSTRUCTION

- GEOMATERIALS foam glass** is used as a draining lightweight fill in gardening and landscaping wherever the lightness of the material and the thermal insulation properties are important for covered components.

ADVANTAGES

- Lightweight & stable weight
- Simple & weather-independent processing
- Can be modeled
- Can be used for drainage



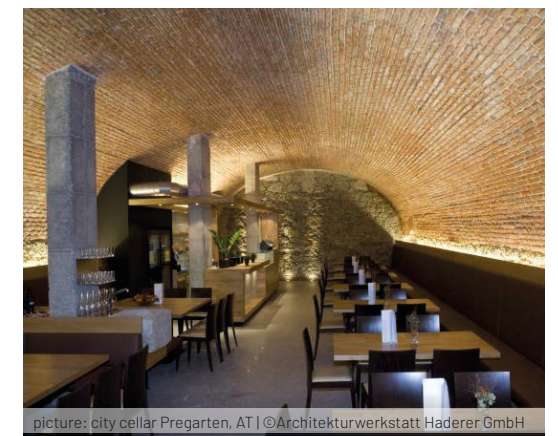
STRONG. WARM. DURABLE.

Made from recycled glass and extremely high quality.

GEOMATERIALS foam glass is a highly thermally insulating, statically resilient bulk material made from 100% recycled glass. As a lightweight fill, it creates a solid foundation for floor structures. The high thermal insulation is based on the large number of pores, whose trapped air is responsible for the excellent lambda value.

GEOMATERIALS foam glass revolutionizes conventional floor construction and replaces the need for rollers, a clean layer and extruded rigid foam sheets. The conventional, structurally complex strip foundation can be dispensed with.

GEOMATERIALS foam glass thus enables thermal bridge-free construction.



SURFACE DESIGN ...

THERMAL INSULATION DRAINAGE LAYER

The good seepage properties, coupled with the low weight and thermal insulation properties, make **GEOMATERIALS foam glass** unbeatable in this application. Thanks to optimum longitudinal and transverse drainage, sports pitches, for example, are dry and playable again more quickly after rainfall.



ADVANTAGES

- Quick and weather-independent processing
- Optimal drainage
- Pressure-resistant material stabilizes the floor and, thanks to its low weight, hardly puts any strain on the substrate



LOAD-BEARING LIGHTWEIGHT FILL

As lightweight fill for green meeting zones above underground garages, for example, **GEOMATERIALS foam glass** not only reduces the ballast load, but can also be statically loaded. Slab material for footpaths and driveways can be laid directly in a layer of chippings on top of the pre-compacted material.



ADVANTAGES

- At only around 150 kg/m³, **GEOMATERIALS foam glass** enables a considerable reduction in weight
- Higher compressive strength with a simple and more cost-effective installation technology



... MADE EASY.

SLOPE STABILIZATION AS REINFORCED SOIL

Despite its lightness, it remains stable in weight, as the foamed foam glass grains are closed-cell and do not absorb water. The material interlocks, is pressure-resistant and reduces slope pressure. At the same time, the slope water can drain away easily due to the high proportion of cavities.



ADVANTAGES

- Weight-stable: enables stabilization of difficult soils
- **GEOMATERIALS foam glass** allows water to run off - but remains dry even in the core



MODELABLE LIGHTWEIGHT FILL

Whether for hilly landscapes, steep slopes or lightweight fill that can be driven on, **GEOMATERIALS foam glass** interlocks and can therefore be applied to inclined surfaces of up to 15°. Due to the high angle of friction, slopes can even be modeled up to 45°.



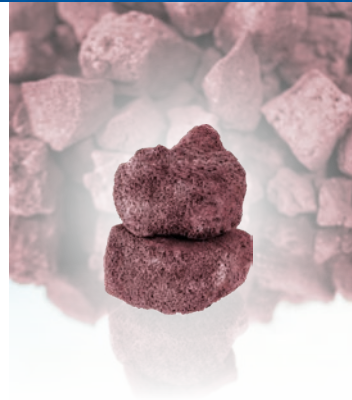
ADVANTAGES

- **GEOMATERIALS foam glass** insulates the building component underneath
- Dimensional stable: always stays in perfect shape
- Distributes loads equally
- Environmentally friendly: harmless to the soil



CONTROLLED WATER STORAGE.

GEOMATERIALS RED expanded glass is a unique lightweight bulk material that has water-retaining and water-regulating properties and is therefore ideal as a system component in the construction of water storage systems.

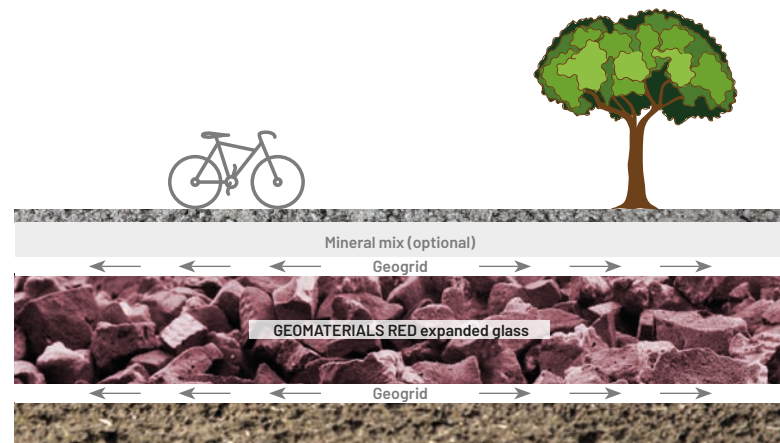


Application: water storage system **AQUA STORE**

- Roof surface drainage for single and multi-family houses
- Irrigation and ventilation of newly planted trees in urban areas
- Flood and inundation areas
- Agricultural use area
- Development of roads and areas
- Roof surface greening; for protection against soil drying out in large-scale industrial construction



The material is suitable as a system component in the construction of water storage systems, as a targeted water absorption of approx. 50% mass can be achieved in a short time. The water is not only stored in the grain structure, but also directly in the grain, thus reducing the buoyancy behavior. If the water level drops again, the stored water can be released back into the soil directly on site.



We point out that all pictures, graphics and drafts shown in this publication are only non-binding detailed descriptions.
All relevant DIN or Ö-standards must be strictly adhered by the user.

THE ALLROUNDER IN ROAD CONSTRUCTION.

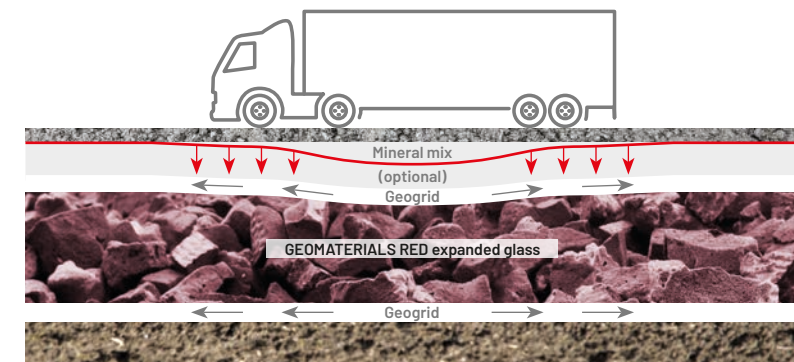
GEOMATERIALS RED expanded glass is a lightweight construction material that can absorb high dynamic loads, significantly reducing settlement. It forms the basis for every foundation, especially in regions with soils with low load-bearing capacity.

Application: traffic route stabilization **GROUND STORE**

- Stabilization of settlement-sensitive soils
- Dike reinforcement, support for reinforcement of embankment and contact surfaces
- Stabilisierung von bewehrter Erde und Stützkonstruktionen
- Stabilization of reinforced earth and supporting structures
- Retention systems as a replacement for retention basins
- Construction of noise barriers in the area of the road widening
- Bank protection, embankment protection of canal waterways, site expansion



We supply a customized system that is specifically tailored to the respective conditions of the subsoil and the requirements of the building.



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