GEOMATERIALS
foam glass gravel

MORE REASONS TO FEEL GOOD.

LIGHT LOAD-BEARING MATERIAL WITH THERMAL INSULATION PROPERTIES.

SCHLÜSSELBAUER GEOMATERIALS

Made from recycled glass and extremely high quality.

STRONG. WARM. DURABLE.

Is there an insulation material, which is lightweight, instantly load bearing, moisture resistant, totally thermal insulating and rot proof? Suitable for almost any type of terrain and easy to process? A building material that is both economically and environmentally sound?

The answer is yes! **GEOMATERIALS foam glass gravel** is a high quality insulation material made of 100% recovered glass, meeting all requirements of a lightweight aggregate with the best characteristics.

GEOMATERIALS foam glass gravel takes over the draining function, is load earing and functions simultaneously as a thermal insulation for covered construction components. This is a brilliant solution for a thermal bridge-free floor construction in one easy step.

THE 7 MAIN ADVANTAGES

- **High Thermal Insulation**
- **Load Bearing**
  the load-capacity can be controlled by the compression ratio
- **Non-Capillary**
  prevents moisture from rising and percolates water
- **Permanently Stable**
  resistant against aging, rotting, fire, bacteria, frost, acids, bases, moisture and rodents
- **Environmentally friendly**
  made from 100% recycled glass, energy efficient in manufacturing, harm- less to soil, inert and pH neutral
- **Saving Time and Money**
  due to efficiency and speed of installation
- **Sustainable**
  no consumption of raw materials as it is made from recycled material

Production of GEOMATERIALS foam glass gravel

USED GLASS AS A RAW MATERIAL

At approx. 900°, glass powder is expanded to foam glass.

Upon cooling, the foam glass cake breaks through tension cracks into foam glass gravel.

Recycled glass is crushed into extremely fine powder and blended with foaming agents. This process reuses valuable raw materials and saves energy initially required for the production of glass. Due to this, the energy used in producing **GEOMATERIALS foam glass gravel** is significantly reduced.

THE MANUFACTURING PROCESS

GEOMATERIALS foam glass gravel is sintered at high temperatures. Foam glass occurs out of glass powder during an expansion process in the latest conveyor ovens at a temperature of approximately 900°C. The foam glass cake comes out of the kiln on the conveyor belt to cool down. During this cooling process, tension cracks occur and so it breaks down into our foam glass gravel. This activity results in the **GEOMATERIALS foam glass gravel** having a closed cell structure, which is evenly distributed.

The finished **GEOMATERIALS foam glass** stands for sustainability through recycling. This makes it particularly environmentally friendly.

APPLICATION
NEW BUILDING

Structural engineering load bearing insulation beneath the ground slab

without strip footing (no basement)
DIN EN ISO 13793

Picture: Klikovits in Siegendorf/Burgenland //
© Wolfgang Paschinger, PASCHINGER ARCHITEKTEN ZT, Vienna

GEOMATERIALS foam glass gravel is revolutionizing the conventional floor structure and replaces gravel, sub base and extruding rigid foam panels. Due to a circumferential insulation of the foundation-/ cellar plate, a closed umbrella-shaped insulation results. Therefore, the conventional and time-consuming strip foundation can be omitted. **GEOMATERIALS foam glass gravel** forms a homogeneous exterior insulation without thermal bridges.

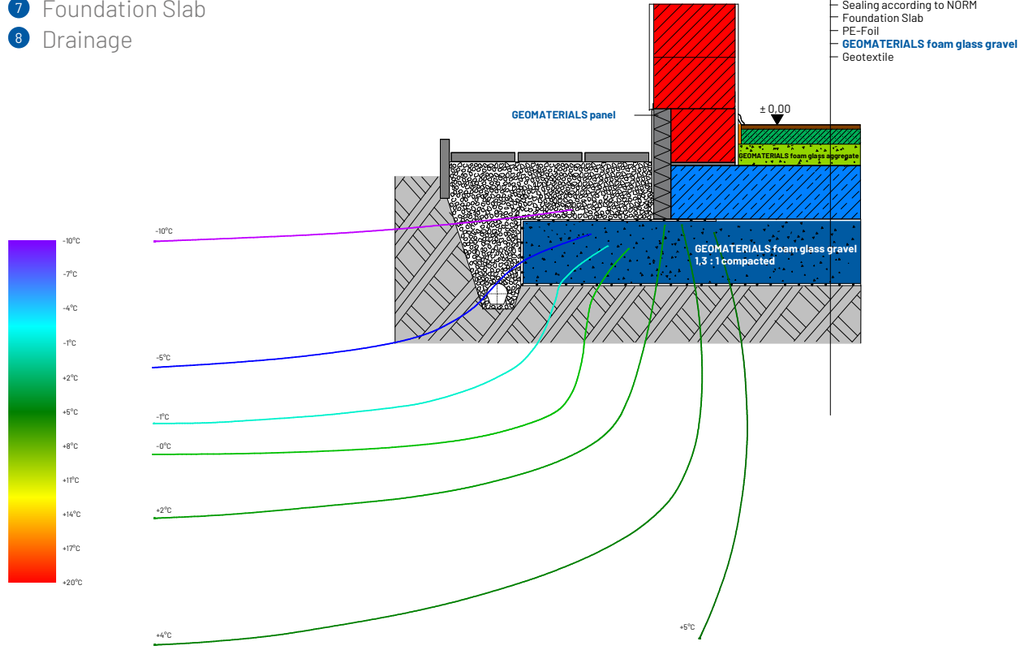
STATIC CALCULATIONS

Support structure planning and construction physics-static constructive processing.
Please look at our references (QR Code) to get details to this project as well as detailed static calculations of the floor slab with **GEOMATERIALS foam glass gravel**.

ADVANTAGES

- Suitable for the thermal insulation beneath the ground slab of single-family houses, production halls, schools and industrial building
- **Higher compressive strength** than other materials at a more simple and cost-effective installation technology
- Operations, such as grading excavation, installation of gravel-, grit- and fine sand ground up to lean concrete layer can be eliminated
- **Strip-foundation can be eliminated.**

1. Sub-grade
2. Geotextile as required
3. **GEOMATERIALS foam glass gravel**
4. PE-Foil
5. Exterior Insulation
6. Masonry
7. Foundation Slab
8. Drainage



APPLICATION
NEW BUILDING

Structural engineering load bearing insulation beneath the floor slab

with strip footing (no basement)

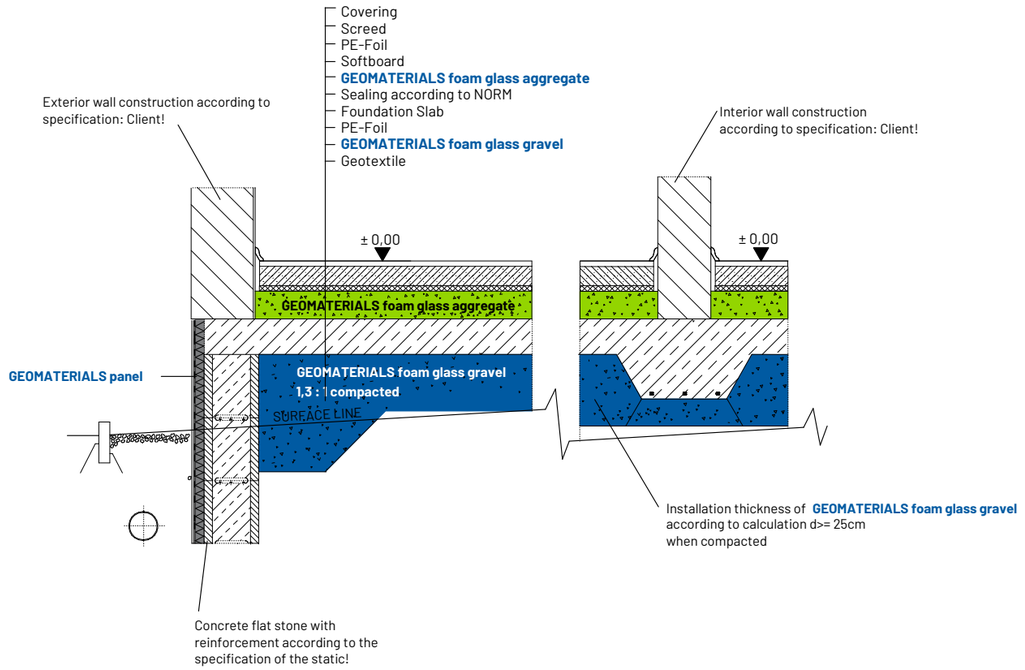
Picture: Ingo Novak, GEOMATERIALS

Ground slabs with **GEOMATERIALS foam glass gravel** are typically executed without strip footing. Should the constructional requirements need a strip footing (slope, rising level), **GEOMATERIALS foam glass gravel** presents the perfect thermal insulation between foundations. As a bulk material, **GEOMATERIALS foam glass gravel** is significantly easier and quicker to install compared to insulating boards. No cutting, just dumping, distributing and vibrating.

ADVANTAGES

- **Simple and quick to install**
- Suitable for the thermal insulation beneath the ground slab of single-family houses, production halls, schools and industrial building
- Operations, such as grading excavation, installation of gravel-, grit- and fine sand ground up to lean concrete layer can be eliminated
- Draining and thermal insulation in one step

1. Sub-grade
2. Geotextile if required
3. **GEOMATERIALS foam glass gravel**
4. PE-Foil
5. Foundation Slab
6. Strip Footing



Floor construction without ground slab

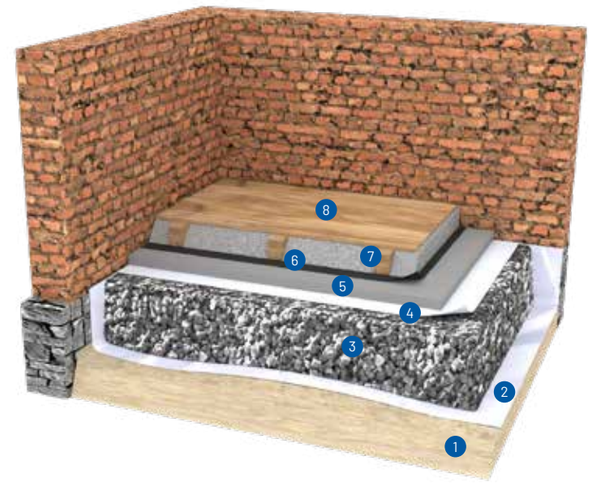
Floor renovation with **GEOMATERIALS foam glass gravel** without a screed

The floor construction with **GEOMATERIALS foam glass gravel** is suitable for new constructions and renovations.

Especially in the application of renovation of floor systems of old buildings where the construction height is limited. **GEOMATERIALS foam glass gravel** combines a draining layer and thermal insulation in one product and thus reduces the construction height. Furthermore, you can do without ground slabs, if you make the floor structure with **GEOMATERIALS foam glass gravel**. With diffusible structures, additional sealing and subbase is not necessary - this is an enormous saving of work time and effort (under consideration of DIN/ÖNORM)!

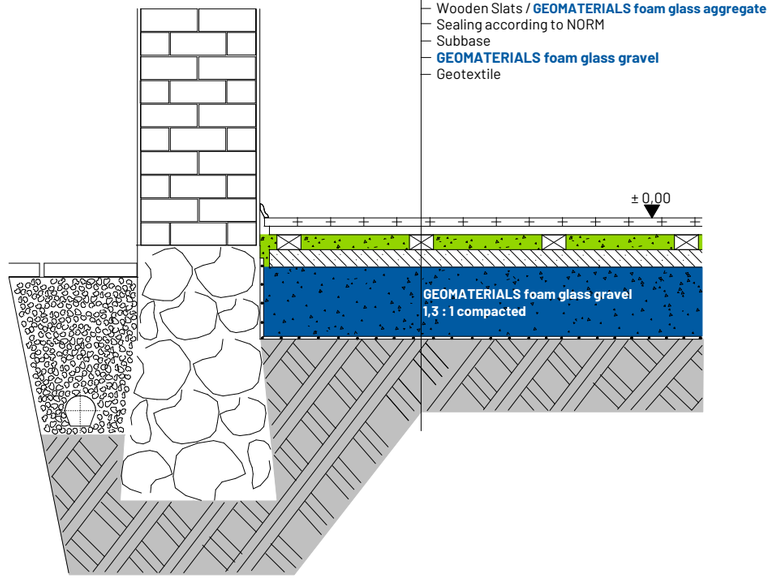
ADVANTAGES

- Suitable for **new constructions** and **renovation of old buildings**
- No requirement of foundation slabs, gravel and subbases
- Significant lower construction height with **GEOMATERIALS foam glass gravel**
- **Environmentally harmless** and thus perfectly suited for living areas



1. Sub-grade
2. Geotextile if necessary
3. **GEOMATERIALS foam glass gravel**
4. PE-Foil
5. Granular Subbase* / **GEOMATERIALS foam glass aggregate***
6. Compaction according to DIN / ÖNORM*
7. Wooden Joists
8. Floor

*can be eliminated



Floor construction without ground slab

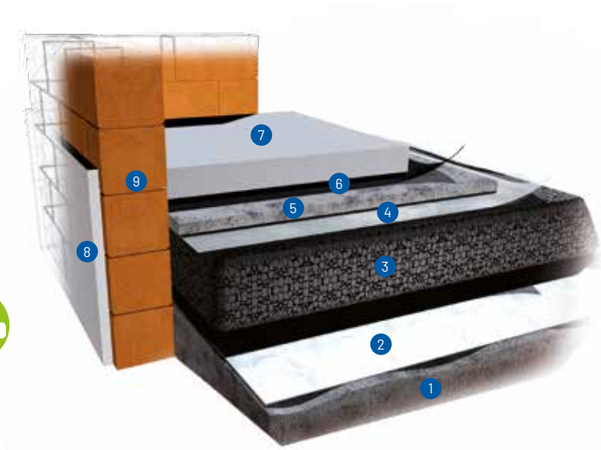
Floor renovation with
GEOMATERIALS foam glass gravel
with a reinforced screed

Picture: Renovation Funnixer Grashaus in Wittmund-Funnix/Germany
© Architect's Office DI Ralph Thater, Wittmund-Funnix

With **GEOMATERIALS foam glass gravel**, a significantly lower construction height can be ealized. Due to the systematical construction with, i.e. 30 cm compacted **GEOMATERIALS foam glass gravel**, you can achieve a perfect floor construction in combination with the subsequent screed layer.

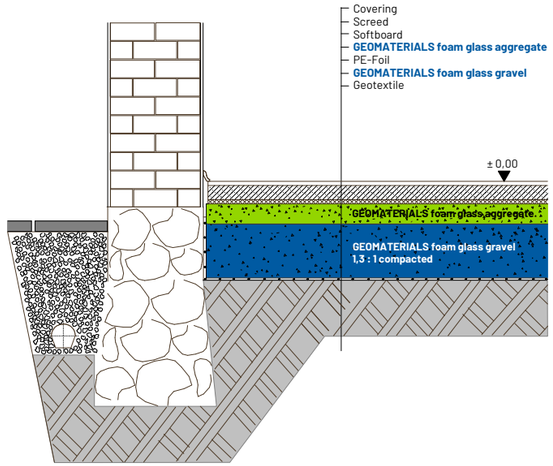
ADVANTAGES

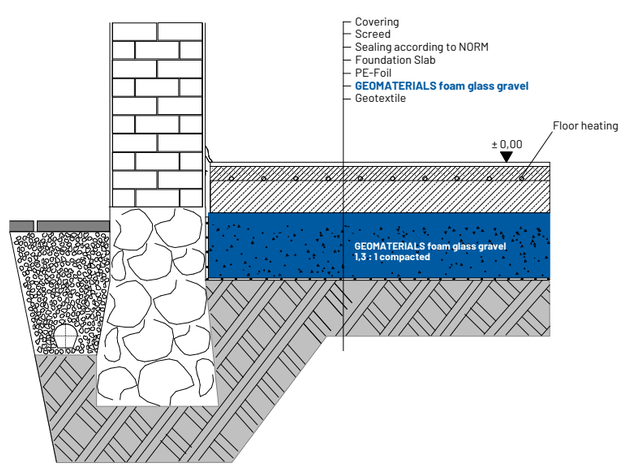
- Suitable for the **renovation of old buildings**
- Foundation slabs and gravel are not required
- Ideal floor construction in combination with a screed layer
- **Significant lower construction height**
- **Environmentally harmless** and thus perfectly suited for living areas



1. Sub-grade
2. Geotextile if required
3. **GEOMATERIALS foam glass gravel**
4. PE-Foil
5. Separation Layer* / **GEOMATERIALS foam glass aggregate***
6. Compaction according to DIN / ÖNORM*
7. Screed (proven screed)
8. Exterior Insulation
9. Masonry

*can be eliminated





Floor construction without ground slab

Floor renovation- combination of
GEOMATERIALS foam glass gravel and
GEOMATERIALS foam glass aggregate

Picture: © Vapiano, Langner Architekten & GEOMATERIALS

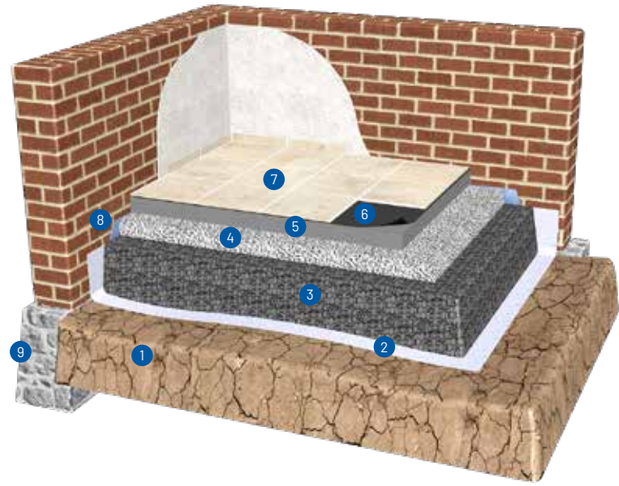
Foam glass aggregate cement-bounded,
Yard MittergroßeFehn, Germany

When using **GEOMATERIALS foam glass gravel** in combination with **GEOMATERIALS foam glass aggregate** – renovation of floors is made easy.

In combination with **GEOMATERIALS foam glass gravel**, which is used for rough level compensation, this is an easy, dry, moisture resistant and incombustible solution for the rebuilding of floor systems.

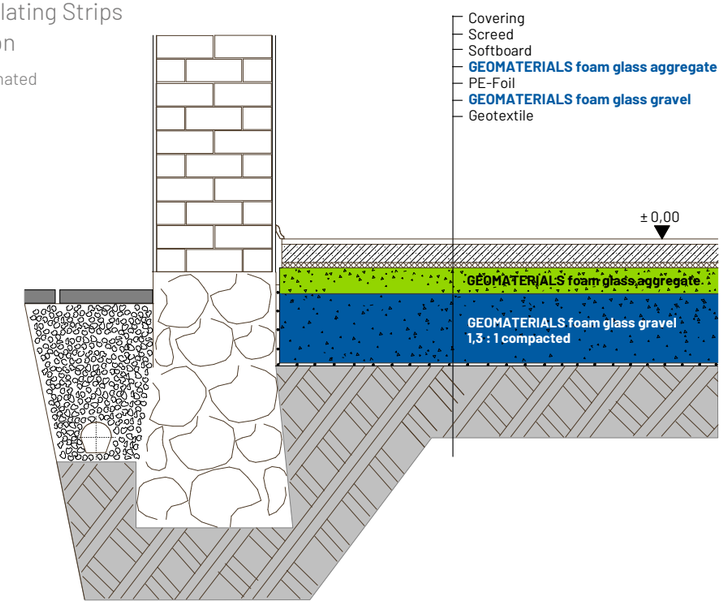
ADVANTAGES

- Suitable for the **renovation of old buildings**
- Foundation slabs and gravel are not required
- Ideal floor construction in combination with a screed layer
- **Significant lower construction height**
- **Environmentally harmless** and thus perfectly suited for living areas
- **Light as a feather**



1. Sub-grade
2. Geotextile
3. **GEOMATERIALS foam glass gravel** possible to use a fleece or PE-foil
4. Granular subbase* / **GEOMATERIALS foam glass aggregate** mineral-bounded / cement-bounded
5. Screed
6. Compaction according to DIN / ÖNORM*
7. Ceramic Cover
8. Edge Insulating Strips
9. Foundation

*can be eliminated



A HIGH QUALITY GLASS PRODUCT

Insulation of vaults

with **GEOMATERIALS foam glass gravel** and/or **GEOMATERIALS foam glass aggregate**


Picture: Villa in Braunschweig, ©Cetin Sönmezocak & GEOMATERIALS


Picture: Födermayr Hargelsberg/OÖ, ©GEOMATERIALS


Picture: Födermayr Hargelsberg/OÖ, ©GEOMATERIALS

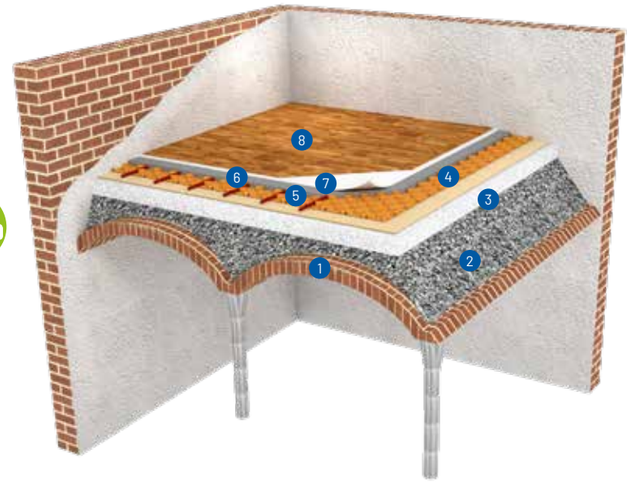

Picture: Födermayr Hargelsberg/OÖ, ©GEOMATERIALS

Light and moisture resistant: GEOMATERIALS foam glass gravel relieves old vaults

Reducing weight and a slim floor structure is the key when it comes to the insulation of old vaults. It is desirable to introduce as little additional humidity as possible. **GEOMATERIALS foam glass gravel** is extremely light and allows for a dry and extremely simple installation. In combination with a plug and play system for underfloor heating, **GEOMATERIALS foam glass gravel** allows an ultra-thin floor structure at the highest ecological quality of living.

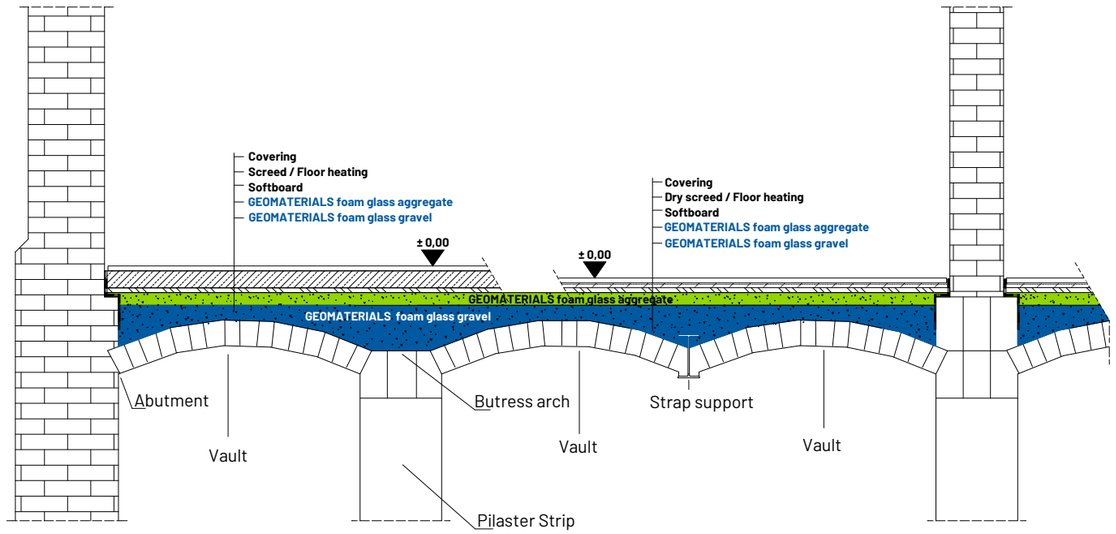
ADVANTAGES

- **Light as a feather** and hardly burdens old constructions
- Suitable for **over-insulation** of old buildings
- **Extremely low floor structure** at the highest ecological living quality
- **Moisture resistant: GEOMATERIALS foam glass gravel** absorbs almost no water and dries out quickly



1. Vault
2. **GEOMATERIALS foam glass gravel** manually compacted
3. **GEOMATERIALS foam glass aggregate** mineral-bounded / cement-bounded PE-Foil*
4. Footfall Sound Insulation
5. Floor heating
6. Screed
7. Fleece (Footfall Insulation)
8. Covering

*can be eliminated



APPLICATION
RENOVATION

Vertical wall- and drainage fill

with **GEOMATERIALS foam glass gravel**

Exposing the masonry and making a drain

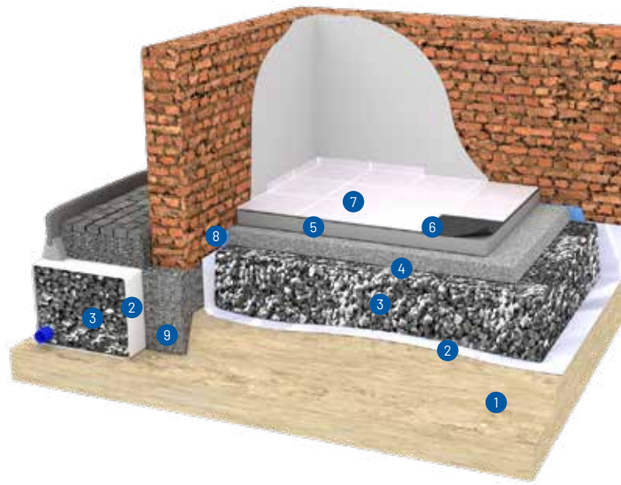
Filling in the working pit and compressing **GEOMATERIALS foam glass gravel** in layers

Picture: SYNergie Bau KG, GEOMATERIALS

Old and humid walls require a controlled humidity exchange. In addition to the creation of a working drain, backfilling with **GEOMATERIALS foam glass gravel** is a suitable method to dry-out walls.

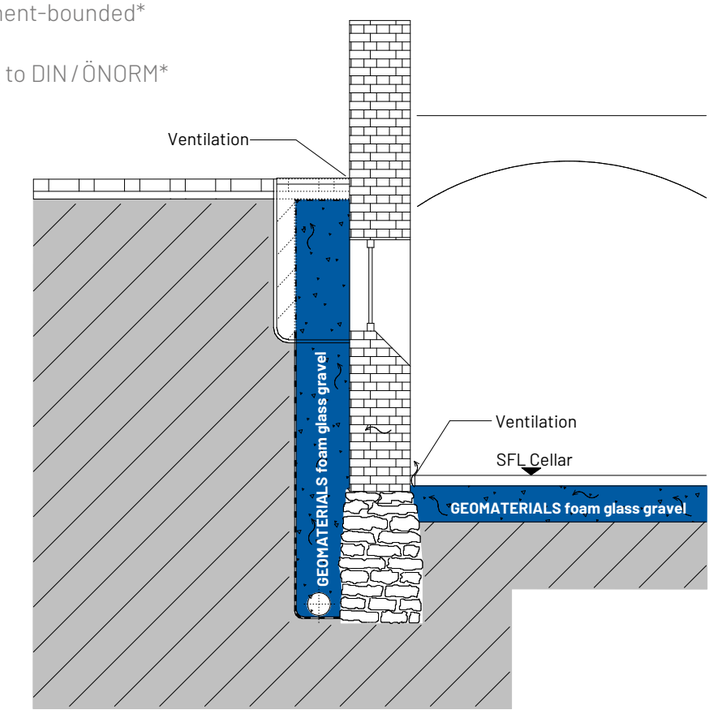
ADVANTAGES

- **GEOMATERIALS foam glass gravel** is **diffusible**. Humid walls can dry again
- **Perfect drainage** even in slopes
- Extremely rapid, simple and safe installation
- **Moisture resistant**
- Environmentally friendly and energy efficient
- Incombustible A1
- **Resistant** against aging, rotting and rodents



1. Sub-grade
2. Geotextile
3. **GEOMATERIALS foam glass gravel**
   possible to use a fleece or PE-foil
4. **GEOMATERIALS foam glass aggregate**
   mineral-bounded / cement-bounded*
5. Screed
6. Compaction according to DIN / ÖNORM*
7. Ceramic Cover
8. Edge Insulating Strips
9. Foundation

*can be eliminated



Pipeline construction

with **GEOMATERIALS foam glass gravel**

Picture: HTL Andorf, © Bauernfeind

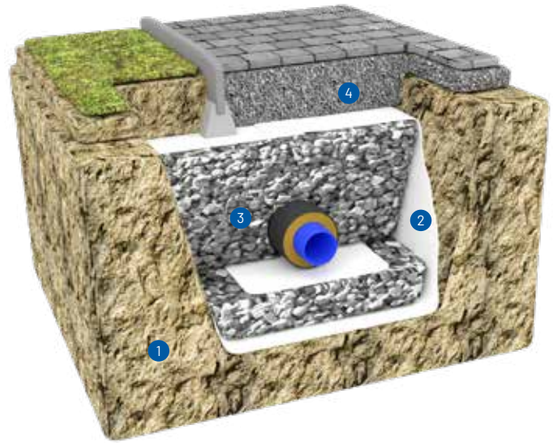
Picture: HTL Andorf, © Bauernfeind

Picture: Sewage water system Lustenau, Wilhelm+Mayer HTL Andorf, © Bauernfeind

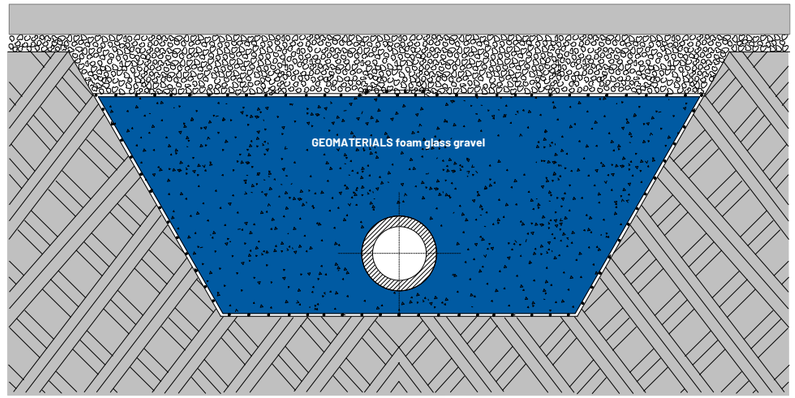
Through its special properties, **GEOMATERIALS foam glass gravel** suits brilliantly for distant and local heating pipes with sub-terrain tanks, i.e. water reservoir or bio-gas plant, transmission stations and distributors. **GEOMATERIALS foam glass gravel** offers as a substructure of pipelines at poor floors a solid basis and reduces thermal losses.

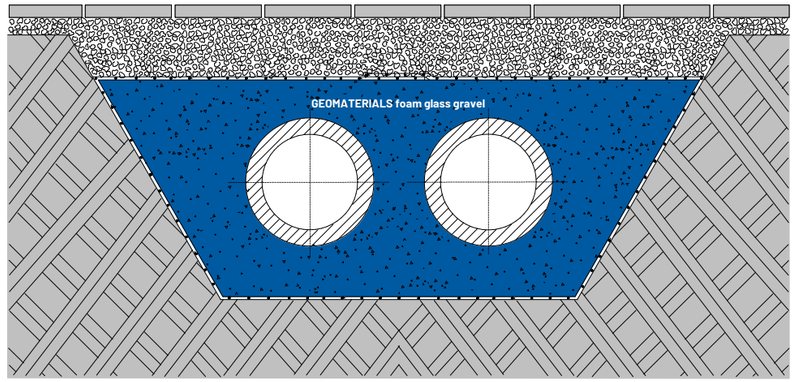
ADVANTAGES

- **Weight stabilization**
- **High draining function**, cross- and alongside draining
- **Reduce thermal losses**
- **Can be modelled**

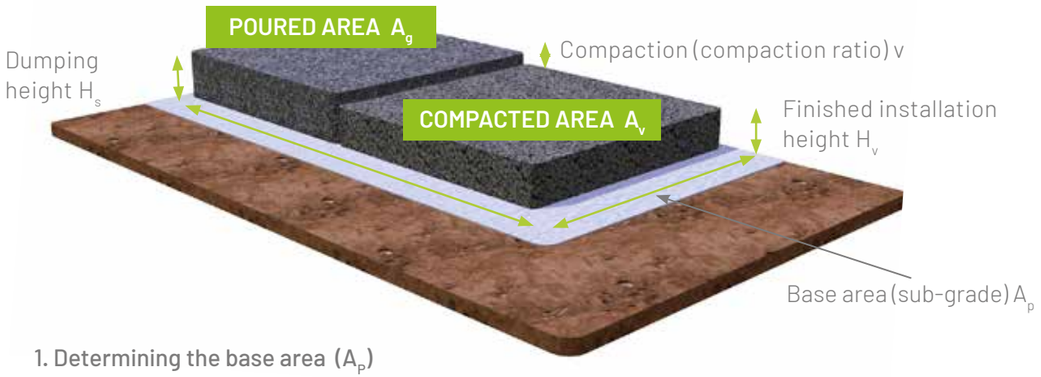


1. Sub-grade
2. Geotextile
3. **GEOMATERIALS foam glass gravel**
4. Frost case





What you should know before installation



1. Determining the base area (A_p)

The base area is the area on which **GEOMATERIALS foam glass gravel** must be installed. Please consider the vertical protrusion above the ground slab.

2. Determining the delivery quantity (L)

The necessary quantity results out of the product of base area, finished installation height and compaction ratio.

$L = A_P \cdot H_v \cdot v$

L	Quantity delivered	[m^3]
A_P	Base are	[m^2]
H_S	Dumping height	[m]
H_V	Finished install. height	[m]
v	Compression ratio	

Calculation example:

$A_P = 125\ m^2$
$H_v = 0{,}30\ m$
$v = 1{,}3$
The dumping height H_S is $0{,}30 \cdot 1{,}3 = 0{,}39$ m

$L = 125 \cdot 0{,}30 \cdot 1{,}3 \sim 49\ m^3$

3. Information regarding the construction site

Depending on the accessibility of the construction site, we offer various options for the installation of **GEOMATERIALS foam glass gravel**. Please contact your GEOMATERIALS consultant to determine the ideal delivery form for your construction site.

Correct compaction

1,3 : 1

After a compaction of 1,3:1 **GEOMATERIALS foam glass gravel** should look like this.

U-Value Calculation:

$$\frac{\lambda}{\text{Thickness (in m)}} = \text{U-Value}$$

Recommended equipment for installation of GEOMATERIALS foam glass gravel

SMALLER AREAS

Lightweight vibratory plate with a strong propulsion

LARGER AREAS

Moderate, non-self-propelled and self-propelled rollers

EXTENSIVE INSTALLATION

Vibrating plate compactor

The proposed equipment gives insight into machinery alternatives for compaction, especially the manually operated plate vibrator that gives the required propulsion for a good compaction result.

TIP

Please do not hesitate to contact your GEOMATERIALS consultant for the best delivery or the best compaction machine for your construction site!

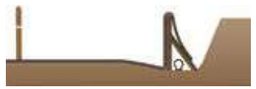
Delivery on schedule, direct discharge at the installation site and precise installation without transshipment as well as the correct selection of equipment saves time and money.

It's so easy!

GEOMATERIALS foam glass gravel
installation step by step

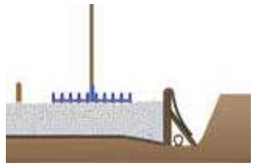
Please note: The use of **GEOMATERIALS foam glass gravel** in the capillary fringe of ground-water or water source areas is not allowed. The natural ground must be well permeable to water. In the presence of cohesive or stratified soils, where accumulation or stratum water can occur, a drainage according to DIN 4095 has to be provided.

Excavation
Excavate immediately prior to the introduction of **GEOMATERIALS foam glass gravel** to meet flatness and compressive strength in accordance with the object-related requirements. Unless otherwise specified, the requirements for flatness and compressive strength should be based on the principles of ZTVE – StB 94. Lay sewage pipes in pipe trenches and fill with sand on sub-grade level.



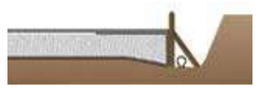
Lay the GEOTEXTILE
Set up the formwork for **GEOMATERIALS foam glass gravel** and lay out the flat surface with geo-textile (150g/m^2) overlapping. Provide sufficient over-hang so that the finished fill can be completely packed later. Position splice bars marking the compacted (final) height of **GEOMATERIALS foam glass gravel**, at regular intervals.

Install GEOMATERIALS foam glass gravel
If **GEOMATERIALS foam glass gravel** is delivered loose, it is offloaded directly into the excavated pit. Above the installation site, the Big Bags have to be lifted and opened from below with the help of an excavator or crane.

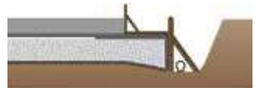


Distribute GEOMATERIALS foam glass gravel
At smaller sites, level **GEOMATERIALS foam glass gravel** uniformly to the marked height using an excavator shovel and rakes. For larger construction sites a mechanical distribution is carried out before the head by a charger or a shovel. Driving over the uncompacted material should be avoided, as pre-compaction increases material consumption.

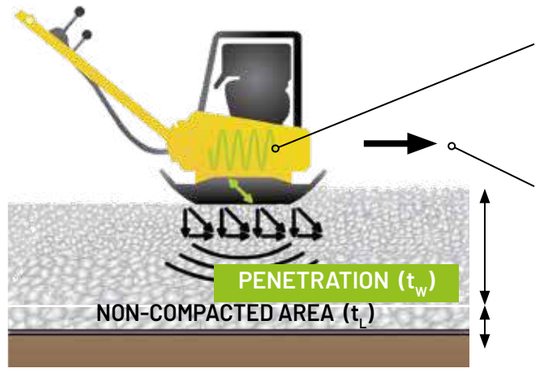
Compact GEOMATERIALS foam glass gravel
For small sites, compacting shall be performed by a lightweight vibration plate (weight: 80-100 kg, frequency: 85-100 Hz, supporting area: 50 cm, straight running). For areas > 200 m^2 you can use a soil compactor. A compression exceeding the specifications, results in a higher material consumption, but does not have any negative impact on the technical properties. For design thickness greater than 30 cm, **GEOMATERIALS foam glass gravel** must be dumped in two layers and each layer has to be compacted. The flatness of the surface has to be made before the compacting process, so that at least a flatness tolerance of +- 3 cm in relation to a length of 4 m is achieved.



Lay the separation layer
After completion of compression, the Geotextile is wrapped-up laterally and the entire **GEOMATERIALS foam glass gravel layer** is covered with a PE-foil to protect against cement residue.



Install formwork for foundation slab
Place the formwork for the floor slab directly on the prepared surface and create the floor slab according to the specification. The ring drainage (sewer pipes) is laid around the pit after the formwork has been removed.



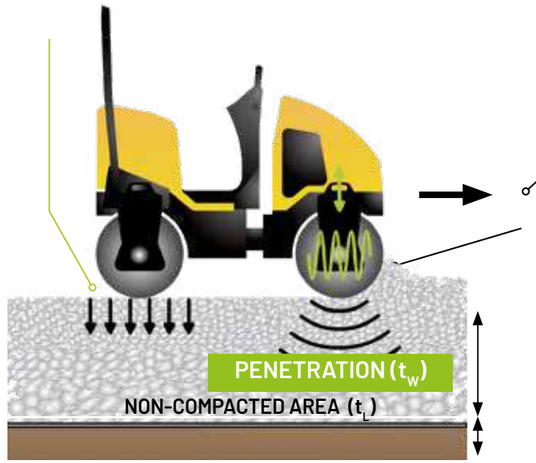
COMPACTION WITH A VIBRATORY PLATE

Generation of the dynamical compaction energy depending on the dwindling mass.
Frequency [Hz] Centrifugal Force [kN]

Working direction and working speed activated through the exciter system.

Static line load (p) through operation weight

THIS IS HOW IT IS COMPACTED:
Static load + dynamical compaction energy



COMPACTION WITH A ROLLER

Working direction and working speed activated through the exciter system.

Amplitude (a) through exciter frequency

THIS IS HOW IT IS COMPACTED:
Static load (operating weight) + dynamical compaction energy

Tips for extensive installation

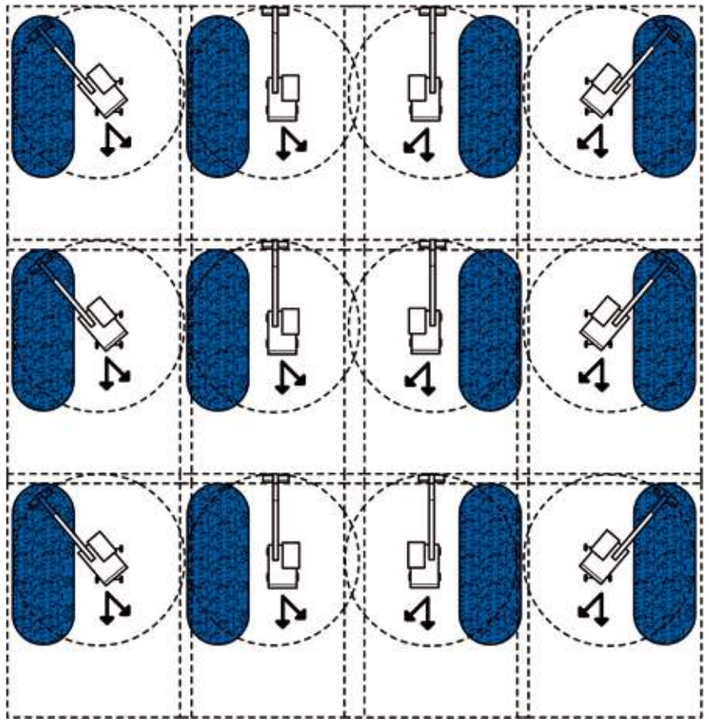
LEGEND

Working direction of the manual whacker

Angle of repose after offloading trough a walking floor truck

Manual whacker
<= 12 t
Shovel
>= 1,8 m³
without teeth

Precalculated area on which the loading volume should be distributed



Extensive installation of **GEOMATERIALS foam glass gravel** for a production hall

Possibilities for delivery and installation

Delivery of bulk material with a walking floor truck
This form of delivery is suitable for construction sites, which can be easily reached. A walking floor truck cannot tilt, but rather shuffles the material with its moving floor from back to front.

Typical dimensions: LxWxH = 18 x 4 x 2,8 m
Loading capacity: 85 - 95 m³ depending on type of truck
Non steerable axles!

Delivery of bulk material with a container truck
This form of delivery is suitable for narrow access roads. The bulk material is divided into the towing vehicle and a trailer. Therefore the material can be brought step by step. Please mind: through the minimized quantity and the additional expense, we charge an extra container surcharge.

Typical dimensions towing vehicle: LxWxH = 9 x 4 x 2,8 m
Loading capacity: 76 - 80 m³ depending on type of truck

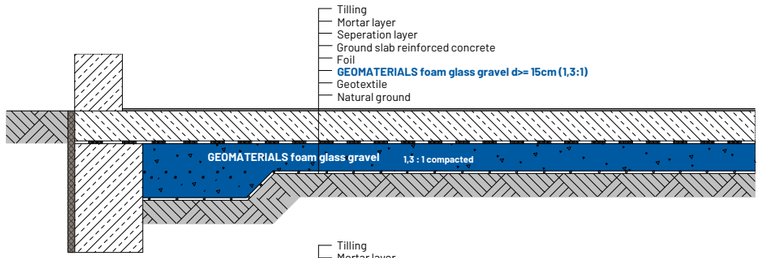
Delivery packed in Big Bags
We also offer the material in packaged form (disposable packaging):

GEOMATERIALS Schaumglas Big Bag 1,5 m³
GEOMATERIALS Schaumglas Big Bag 2 m³
GEOMATERIALS Schaumglas Big Bag 3 m³

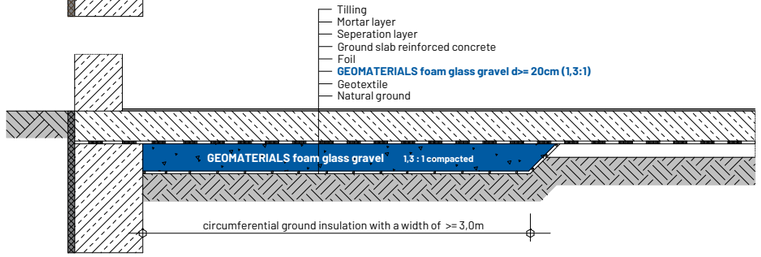
Installation with a dispensation-towel
Especially for stepped, impassable areas, there is the possibility to install the bulk material with the help of a dispensation-towel. The material is conveyed from the walking floor truck into the towel, spread on the ground with a capacity of 12 m³. The dispensation-towel can be moved with a crane. The distribution of the material happens through the outlet spigot. We gladly provide the dispensation-towel for a daily fee.

Extensive application

For business and industrial objects



Surface insulation of a warehouse.



Fringe insulation
surrounding floor insulation with a width of >= 3 m

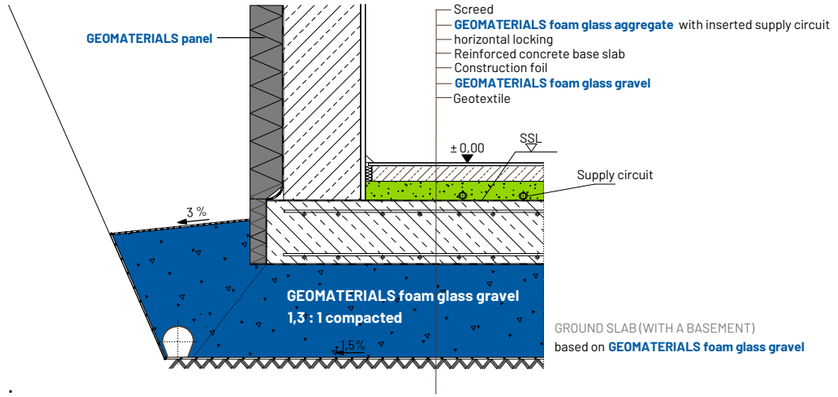
HIGH THERMAL INSULATION:
Full surface exterior thermal insulation

NON-CAPILLARY:
Replaces the capillary-breaking layer

LOAD BEARING:
Highly resistant in industrial construction

COST AND ENERGY SAVING:
Especially in extensive installation

Concrete floor slab with a basement/slope

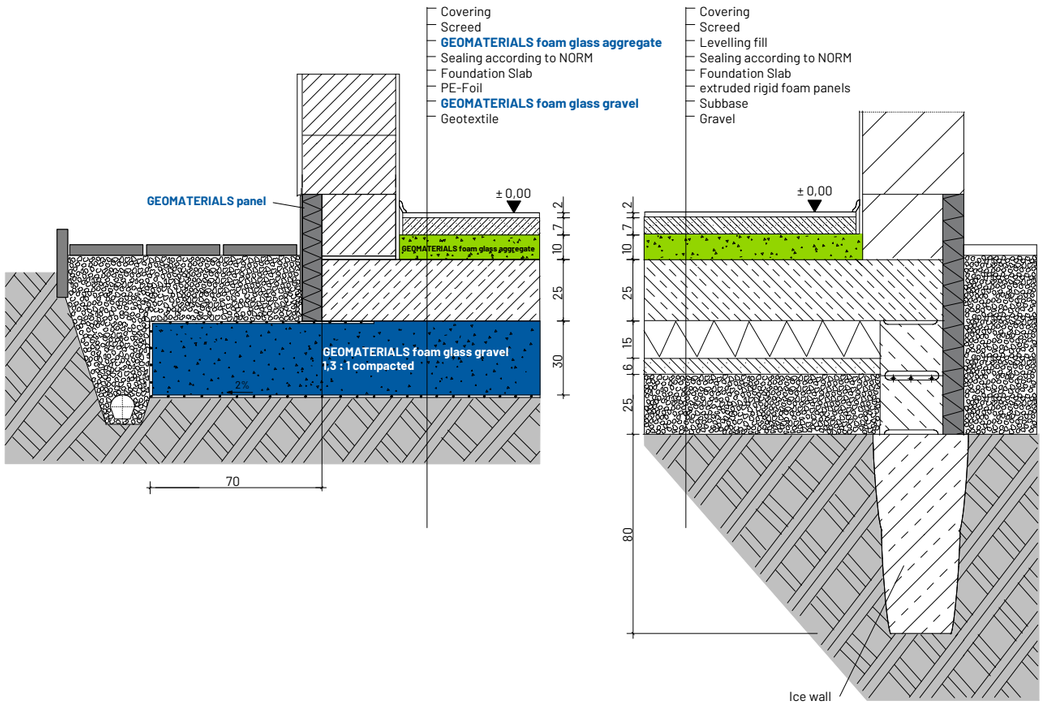


GROUND SLAB (WITH A BASEMENT)
based on **GEOMATERIALS foam glass gravel**

Pictures: Nursery School, Salzweg, Germany, Architects office Oliver Krinninger

Saving cons-truction costs

with **GEOMATERIALS foam glass gravel**



- Load bearing insulation with high sustainability
- No gravel necessary
- Strip-foundation can be eliminated significantly lower construction height with
- **GEOMATERIALS foam glass gravel** saving working time
- Thermal bridge free construction
- Possibility for a component-activated ground slab (with a screed)

GEOMATERIALS foam glass gravel – the fundamentally better alternative

for all applications

Picture: Home-Center Kröll & Winkler, Taxenbach, Salzburg
© Kröll & Winkel GmbH & Co KG, GEOMATERIALS

Picture: Primary School in Unternberg, Salzburg
© WISA-Bau GmbH, GEOMATERIALS

Picture: Cardinal Schwarzenberg Medical Center, Schwarzach i. Pongau, © Mrazek, Wörner Traxler Richter, GEOMATERIALS

Picture: Veterinary Clinic Dourakas, Schweiggers, Lower Austria
© GEOMATERIALS, Dourakas

Picture: METRO, St. Pölten, Lower Austria
© GEOMATERIALS

Technical data

WPK	Compliance with product quality characteristics, factory production control (WPK) Nr. 03/Gsp/2021
General technical approval	DIBT-Approval Z-23.34-1579
Check of load-carrying capacity	according to DIN 18134

According to DIBT Approval Z – 23.34 – 157, for application 'thermal insulation', there is no plate load testing necessary.

Among other things, in Germany and Austria it is required that near-surface, loosened layers must be removed before plate load testing carefully and the test has to be carried out on an undisturbed soil. With **GEOMATERIALS foam glass gravel**, this is not possible - in this case, **GEOMATERIALS foam glass gravel** behaves like any other building material. This near-surface, loosened grain is measured of the measurement of the initial stressing will be comparatively low, due to the plastic behaviour. Thus, a ratio value of Ev2/Ev1 between 3 and 6 (dependent on the compaction) is absolutely normal for **GEOMATERIALS foam glass gravel**.

NOTES

Best performance down to the smallest detail

Technical data and characteristics

load-bearing insulation material – DIBT Approval Z – 23.34 – 1579			
load-bearing bulk material – DIN EN 13055-2			
Granular size as supplied	K	10 to 60	mm
Bulk weight / Transportation weight [1]	m_f	approx. 150,00	kg/m³
Internal water absorption of each grain	w_i	0,00	Vol.%
Water absorption of grain surface [2]	w_a	< 10,00	Vol.%
Declared thermal conductivity [3]	λ_{90}	≤ 0,080	W/(m·K)
Applied thermal conductivity (Switzerland)	λ_{90}	≤ 0,084	W/(m.K)
Authorized rated value	$\lambda_{Bem.}$	= 0,11	W/(m.K)
Design value of compressive strength at compression factor 1 : 1,3 [4]	σ_{cd}	≥ 275,00	kN/m²
Compressive strength in uniaxial compressive test [5]	σ_{10}	≥ 570,00	kN/m²
Compressive strength of each grain	p	≥ 2,00	N/mm²
Internal friction angle (at compaction 1 : 1,3 compression) [6]	Φ	45 - 48	°
Cohesion (calculation value)	c	0,00	kN/m²
Apparent cohesion (calculation value)	c_s	0,00	kN/m²
Hydraulic permeability in grain structure	K_f	~ 4,4 * 10^{-2}	m/s
Condensation		prevents condensation in the building component	
Freeze-thaw [7]		GEOMATERIALS foam glass gravel is verifiably frost resistant	
Diffusion properties	μ	diffusible	
Capillarity [8]		GEOMATERIALS foam glass gravel is anti-capillary against rising water	
Fire resistance		A1: incombustible component according DIN 4102-1	
Resistant to environmental influences		GEOMATERIALS foam glass gravel is durable, rodent-, bacteria-, and influences rot-resistant	
pH-value	7		

There are no restrictions on the use of GEOMATERIALS foam glass gravel in protected areas regarding water management and water regulations according to BbodSchG.

(1) in consideration of the weight proportion of absorbed water on the grain surface
(2) free + bound water at the grain surface
(3) according to the General Technical Approval: inspection of the thermal conductivity according to DIN EN 12667 and DIN EN 12939
(4) allowable compressive stress in compliance with global safety factors for verification according to DIN 1054, 1976-11
(5) as specified by the General Technical Approval: Uniaxial compression test inspection DIN EN 826 (1996-05)
(6) factory data
(7) according to the guidelines of the General Technical Approval Z – 23.34 – 1579, the manufacturer of GEOMATERIALS foam glass gravel is requested to measure freeze-thaw fluctuating (DIN 52 104-1) on a regular basis
(8) non-capillary characteristics result from the low proportion of fines and the existing void ratiot

All information on technical parameters is minimum data. The manufacturer can exceed this evidently by the WPK.

The technical guidelines for the application and installation of GEOMATERIALS foam glass gravel is based on the previous experiences and the status of technology. They are not case related. Therefore, we do not assume liability for the completeness and suitability of a particular project. Apart from that, our liability and responsibility only depends on our general terms and conditions and they are neither through the statement of this brochure not through the advice of our technical engineers extended.

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