MORE REASONS TO FEEL GOOD

THE ECOLOGICAL, NON-FLAMMABLE THERMAL INSULATION BUILDING MATERIAL

GEOCELL PANEL

A HIGH QUALITY PRODUCT MADE FROM WASTE GLASS

GEOCELL ® PANEL : INSULATING CAN BE SO EASY AND WORTHWHILE!

Is there a building material that does not lose its insulating value even in standing and pressing water? The answer is yes! **GEOCELL ® Panel,** is a foam glass panel used to keep cold and moisture out.

GEOCELL ® Panel stands out on account of its basic raw material and cell structure. An all-rounder with many advantages that can be used not only indoors on walls, floor slabs, and ceilings, but above all around the perimeter area, on facades and under roofs as external insulation.

GEOCELL ® Panel is THE ecological, non-flammable, and waterproof thermal insulation building material for interior and exterior use.

AN ALL-ROUNDER WITH MANY ADVANTAGES

HIGH THERMAL INSULATION
Lambda value see technical data

WATERPROOF
does not absorb moisture and does not swell; can also be used in pressing and standing water

VAPOR-RESISTANT
cannot become soaked through and, depending on the application, can in some cases be used without a vapor barrier

NON-FLAMMABLE
as well as being used for insulation, it is also suitable for fire protection (EN13501, fire protection class A1); it does not emit smoke or toxic gases in a fire

PRESSURE-RESISTANT
Highly resilient, e.g., in parking deck construction and on surfaces subject to heavy loads

RESISTANT
against frost, organic solvents and acids

PEST-RESISTANT
Nesting, breeding, or germination is impossible

EASY TO WORK WITH
GEOCELL ® Panel can be cut to any required size using simple tools such as a saw blade or a board saw

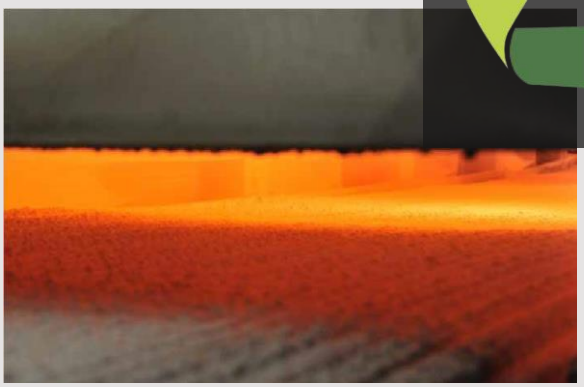
ENVIRONMENTALLY FRIENDLY
free from environmentally harmful flame retardants and propellant gases

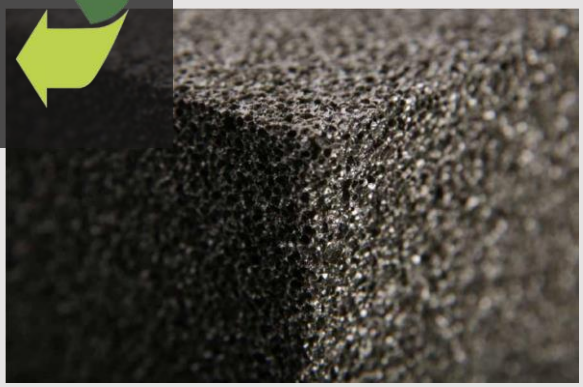
Detailed proposals and tender specifications on request. For further solutions, please do not hesitate to contact our technical consultants. As of: February 2018. We expressly reserve the right to amend the technical specifications at any time.

GEOCELL ® PANEL PRODUCTION

Recycling waste glass is environmental protection in action
Photo: © Austria Glas Recycling GmbH

Photo: © Austria Glas Recycling GmbH





GEOCELL® Panels are manufactured in a tunnel kiln
Photos: © GEOCELL®

The raw material: waste glass

GEOCELL ® Panel is made from 100% high quality waste glass. Ordinary packaging glass and window glass is used in its production. **GEOCELL ® Panel** therefore helps to close the recycling loop and conserves natural resources.

The production process:

After cleaning and drying, the glass is crushed and blended with foaming agents. The foaming agent used is pure carbon, i.e. carbon black. Then the powder obtained from the glass and carbon black is poured into casting molds and sent to the foaming furnace. Foaming occurs at a temperature of 1000°C and looks like bread baking.
After the foaming furnace, the hot blocks are released from the casting molds and placed in the lehr, where the blocks are slowly cooled.

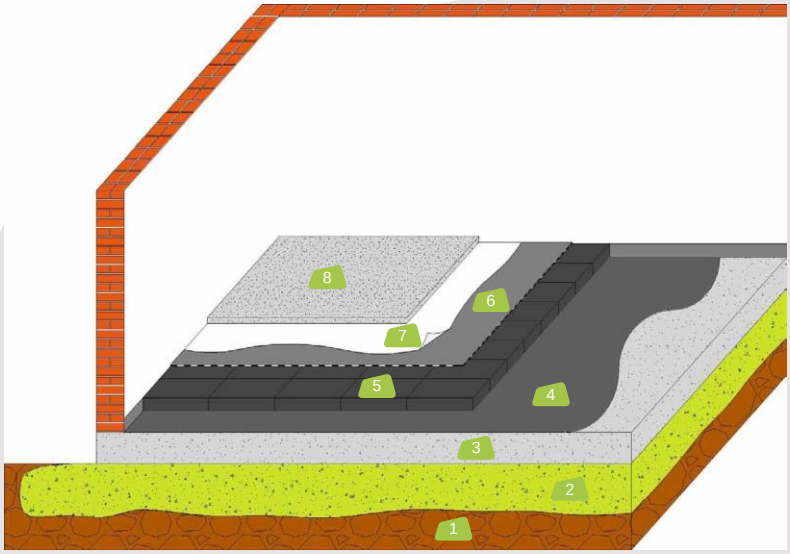
The advantages of producing GEOCELL ® PANEL in the tunnel kiln

- The 650 x 450 mm predefined mold size ensures the stability and dimensional accuracy of the panel
- The cooling process is continuous compared to a strand furnace and has a positive ef fect on the compressive strength of the cell structure -
- The stable cell structure in turn offers a high degree of diffusion resistance

Application areas:

1 GEOCELL ® PANEL INTERIOR INSULATION ON THE FLOOR SLAB

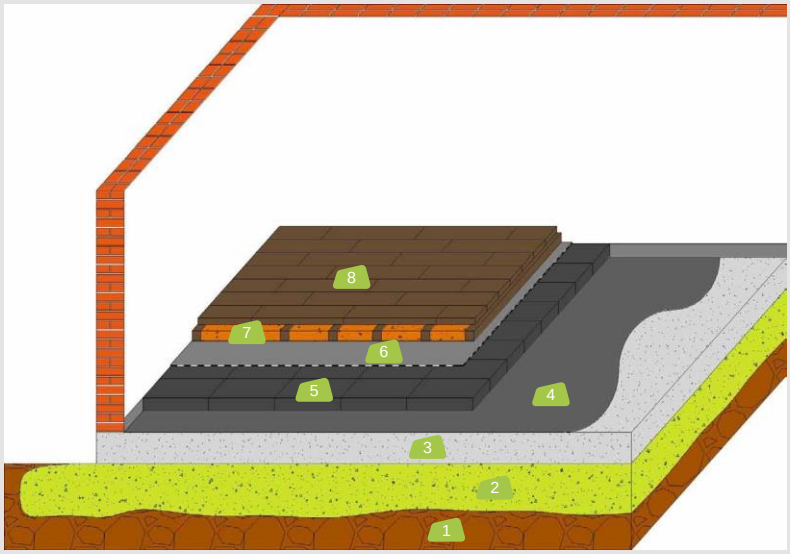
Under screed / ready-mixed screed with cold adhesive or hot bitumen



VARIANT:

under screed / ready-mixed screed

1 Soil
2 GEOCELL ® Foam glass
3 Floor slab
4 Primer
5 GEOCELL ® Panel
6 Cell-filling top coat or pore-filling scratch coat
7 Separation layer
8 Screed



VARIANT:

under raised floor

1 Soil
2 GEOCELL ® Foam glass
3 Floor slab
4 Primer
5 GEOCELL ® Panel
6 Cell-filling top coat or pore-filling scratch coat
7 GEOCELL ® Foam Glass Aggregate
8 Floor

GEOCELL ® PANEL - Installation with cold adhesive

Planning and construction basics:

When using **GeoCell ® Panel** there is no need for a vapor barrier, as the material is vapor-resistant due to its closed-cell structure. A radon-proof seal can be produced (see technical data sheets at www.remmers.de).

The existing substrate must be dry, level, load-bearing, dust-free, and free of residues (oils, greases, etc.). The substrate and the ambient temperature must not be below + 5 °C. Other components must be adequately protected against possible adhesive splashes.

IT'S SO EASY!

INSTALLATION STEP BY STEP WITH COLD ADHESIVE

1	The floor slab must be load-bearing and free of separating substances
2	Clean the surface of the floor slab and apply a primer coat of Remmers Kiesol MB
3	Apply the primer to the dry concrete surface using a roller (or sprayer)—coverage approx. 0.2 l/m²–0.5 l/m²
4	Allow the primer to sufficiently dry or flash off
5	Lay **GeoCell ® Panel** foam glass panels over the entire surface with filled and staggered joints using cold adhesive (apply with 8 mm notched trowel)
6	Use an 8 mm notched trowel to smooth the short and long edges of the **GeoCell ® Panel** foam glass panels and push them into place against the already installed panels
7	Apply a cell-filling top coat or pore-filling scratch coat to the **GeoCell ® Panel** foam glass panels (coverage approx. 1.5 kg/m²)
8	Setting time depends on room temperature and air humidity (approx. 12 hours bituminous, approx. 4 hours mineral)
9	Then lay the separation layer and overlap the joints
10	After that, apply the cement or anhydrite screed

RECOMMENDED COLD ADHESIVE FOR INSTALLING **GEOCELL ® PANEL**

Remmers PBD 2K (bituminous)

Coverage approx. 3–4 kg/m², depending on the unevenness of the substrate and the thickness of the insulation material

Remmers MB 2K (mineral)

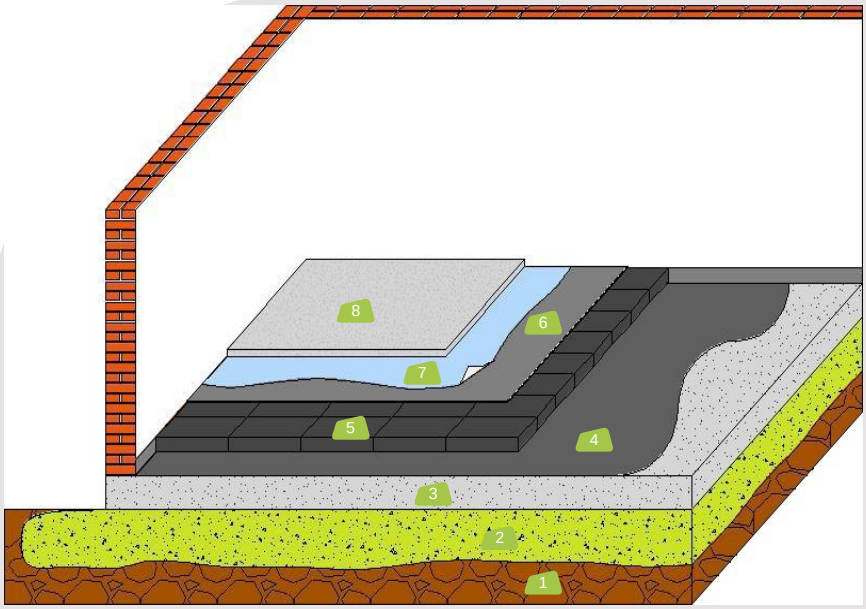
Coverage approx. 3.5–4.5 kg/m², depending on the unevenness of the substrate and the thickness of the insulation material

Ravenit Bauflex 2K (mineral)

2-component carbon fiber-reinforced highly flexible, reactive universal waterproofing

2 GEOCELL ® PANEL INTERIOR INSULATION ON THE FLOOR SLAB

under the poured asphalt screed with hot bitumen



1 Soil
2 GEOCELL ® Foam glass
3 Floor slab
4 Primer
5 GEOCELL ® Panel laid in hot bitumen
6 Cell-filling top coat with hot bitumen
7 Separation layer (heat resistant)
8 Poured asphalt screed

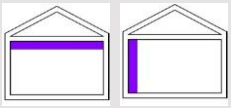
IT'S SO EASY!

INSTALLATION STEP BY STEP WITH HOT BITUMEN

1	The surface of the floor slab must be cleaned
2	Apply the primer to the cleaned, dry concrete surface using a roller (or sprayer). Coverage approx. 0.2 l/m²–0.5 l/m². Allow the primer to sufficiently dry or flash off
	The following work steps are already possible on the slightly moist primer:
3	Pour hot bitumen over the entire surface of the GeoCell ® Panel foam glass panels with filled and staggered joints using the casting method
4	Dip the short and long sides of the GeoCell ® Panel foam glass panels into poured hot bitumen and press them against the already laid panels. Using the next panel to be laid, wipe off the hot bitumen that has flowed out to avoid unevenness
5	Apply a cell-filling top coat to the GeoCell ® Panel foam glass panels. Pour out the hot bitumen and spread it over the top surface of the panel using a rubber slider (coverage approx. 1.5–2 kg/m²)
6	Then lay the separation layer and overlap the joints
7	After that, apply the cement or anhydrite screed

3 GEOCELL ® PANEL INTERIOR INSULATION FOR CEILINGS AND WALLS

with cell-filling top coat



1 Concrete ceiling
2 Primer
3 **GEOCELL ® Panel**
4 Cell-filling top coat

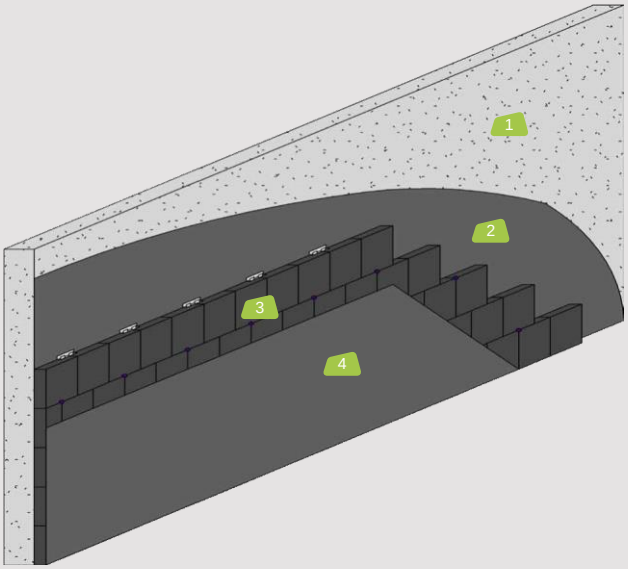
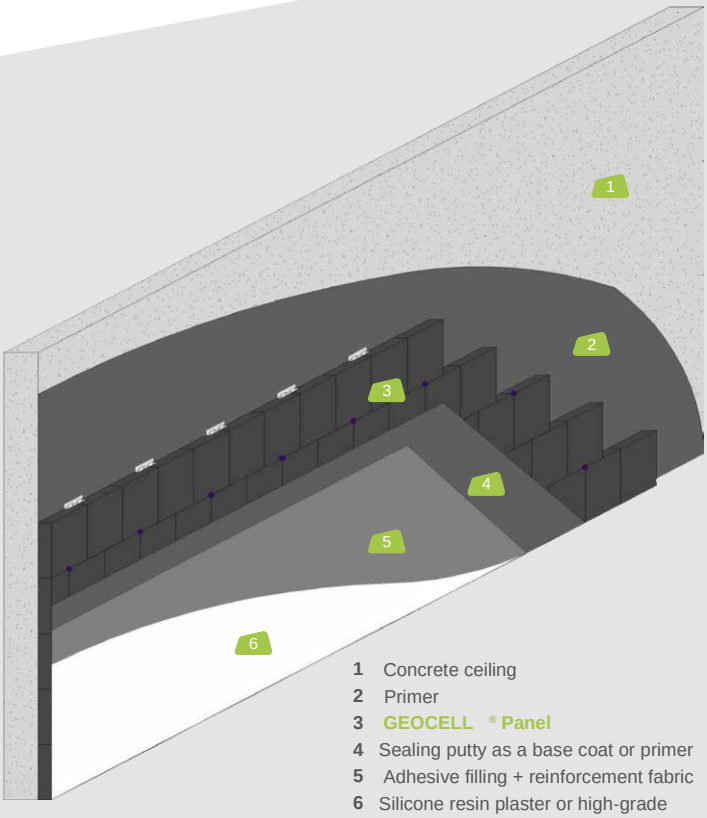


Photo: © GEOCELL ®

4 GEOCELL ® PANEL INTERIOR INSULATION FOR CEILINGS AND WALLS

with plaster system

Photo: © GEOCELL ®



1 Concrete ceiling
2 Primer
3 GEOCELL ® Panel
4 Sealing putty as a base coat or primer
5 Adhesive filling + reinforcement fabric
6 Silicone resin plaster or high-grade plaster

GEOCELL ® PANEL and the plaster system

Application example and recommended products:

1 QUARZOLITH sealing putty 2K as a base coat or primer

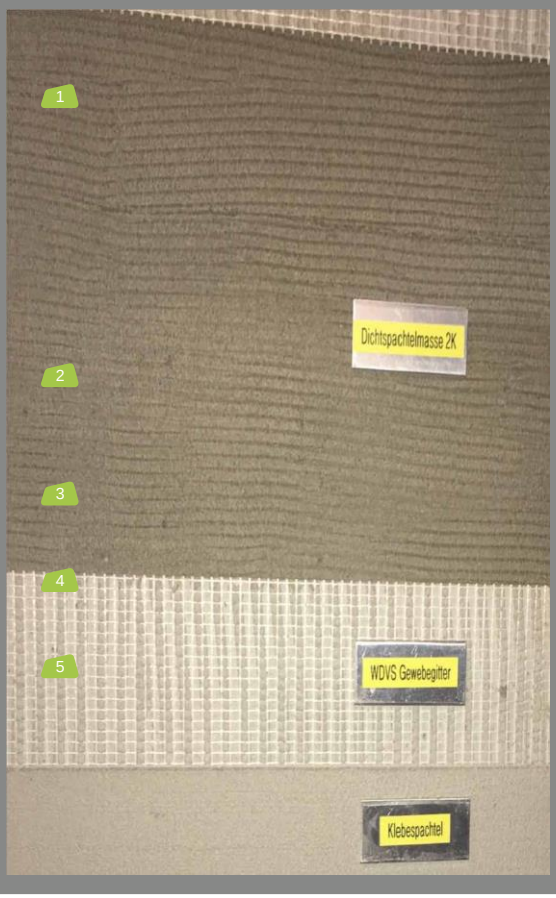
2/3 Apply QUARZOLITH gray adhesive filler and embed reinforcement fabric (layer thickness of 3 mm must be ensured)

4 QUARZOLITH universal plaster primer

5 QUARZOLITH silicone resin plaster white or colored grain size 1–3 mm

OR

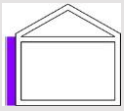
QUARZOLITH high-grade plaster mineral finishing plaster white grain size 1–3 mm, finally a double leveling coat must be applied (e.g., QUARZOLITH Ecoline white or colored)



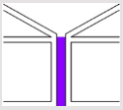
5 GEOCELL ® PANEL EXTERNAL INSULATION

on walls

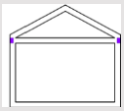
VARIANTS:



behind cladding / wooden facade / fiber cement



as core insulation



as an insulating block for storys

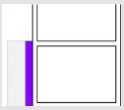
6 GEOCELL ® PANEL EXTERNAL INSULATION AS PERIMETER

with cold adhesive

VARIANT: on the basement wall / perimeter on watertight concrete

Description of the construction from the inside to the outside:

- Concrete wall / watertight concrete, waterproof tanking
- Primer coat with Remmers Kiesol MB
- GEOCELL ® Panel
- Cell-filling top coat / pore-filling scratch coat with Remmers PBD 2 K
- Protective layer (e.g., Remmers DS Protect protective layer)
- Soil / backfill



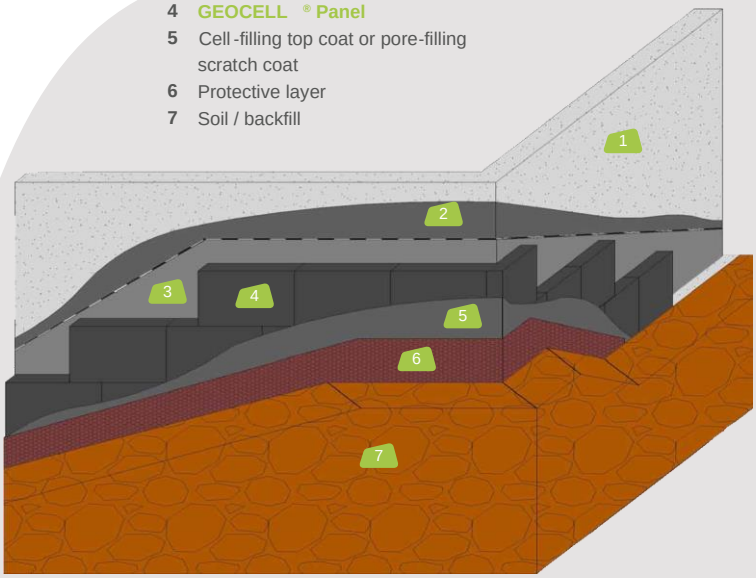
VARIANT: on the basement wall / perimeter on sealed brickwork

Description of the construction from the inside to the outside:

- Concrete wall / watertight concrete, waterproof tanking
- Primer coat with Remmers Kiesol MB
- Bituminous or mineral waterproofing according to DIN18533
- GEOCELL ® Panel
- Cell-filling top coat / pore-filling scratch coat with Remmers PBD 2 K
- Protective layer (e.g., Remmers DS Protect protective layer)
- Soil / backfill

VARIANT: on the basement wall / perimeter with external waterproofing

1 Concrete wall
2 Primer
3 Bituminous or mineral waterproofing
4 **GEOCELL ® Panel**
5 Cell-filling top coat or pore-filling scratch coat
6 Protective layer
7 Soil / backfill



IT'S SO EASY!

INSTALLATION STEP BY STEP WITH COLD ADHESIVE

1	The building waterproofing must be fully cured and load-bearing
2	If a radon-proof seal is to be produced, observe the technical data sheets www.remmers.de
3	Apply the primer to the dry concrete surface using a roller (or sprayer)—coverage approx. 0.2 l/m²–0.5 l/m²
4	Allow the primer to sufficiently dry or flash off
5	Lay **GeoCell ® Panel** foam glass panels over the entire surface with filled and staggered joints using cold adhesive (apply with 8 mm notched trowel)
6	Use an 8 mm notched trowel to smooth the short and long edges of the **GeoCell ® Panel** foam glass panels and push them into place against the already installed panels
7	Apply a cell-filling top coat or pore-filling scratch coat to the **GeoCell ® Panel** foam glass panels (coverage approx. 1.5 kg/m²)
8	Setting time depends on room temperature and air humidity (approx. 12 hours bituminous, approx. 4 hours mineral)
9	Then lay the filter mats/panels as a protective layer
10	Backfill the construction pit layer by layer—take special care not to damage the system

GEOCELL® PANEL as INDIVIDUAL FIRE PROTECTION CONSTRUCTION

- On exterior facades
- On interior walls
- In tunnel and transport infrastructure construction
- In industrial construction
- In ventilation systems

GEOCELL® PANEL and THE FORMS OF DELIVERY

Length x width (mm)	600 x 450	600 x 450	600 x 450	600 x 450	600 x 450	600 x 450	600 x 450
Thickness (mm)	40	50	60	80	100	120	140
R (m^2K/W)	0.77	0.96	1.1	1.45	1.85	2.2	2.59
Pieces per pallet	80	64	56	40	32	28	24
Area (m^2)	21.60	17.28	15.12	10.8	8.64	7.56	6.48

Other dimensions and thicknesses on request

TECHNICAL DATA

GENERAL PROPERTIES	
Fire behavior (EN 13501-1)	Euroclass A1, non-combustible
Application temperature limits	-200°C to +500°C
Water vapor diffusion resistance (EN ISO 10456)	$\mu = \infty$ practically diffusion-resistant
Hygroscopy	none
Capillarity	none
Properties	watertight, pest-proof, highly pressure-resistant, acid- and chemical-resistant, non-flammable, vapor-resistant, dimensionally stable, environmentally friendly, radon protection
PRODUCT PROPERTIES ACCORDING TO EN 13167	
Bulk density (± 10%) (EN 1602)	160 kg/m^3
Thickness (EN 823) ± 2 mm	from 40–140 mm
Length (EN 822)± 2 mm	600 mm
Width (EN 822) ± 2 mm	450 mm
Thermoconductivity	$\lambda_D \leq 0.052$ W/(m·K)
Fire behavior (EN 13501-1)	Fire protection Euroclass A1
Point load (EN 12430)	PL ≤ 1.5 mm
Compressive strength (EN 826 Annex A)	CS(Y) 700 kPa
Flexural strength (EN 12089)	FS ≥ 400 kPa
Tensile strength (EN 1607)	TS ≥ 120 kPa

GEOCELL ® PANEL

THE ECOLOGICAL THERMAL INSULATION BUILDING MATERIAL FOR INTERIORS AND EXTERIORS

CE DIN EN 13167

TESTED QUALITY

ROMANIA:

Tel : +40740202421 ;

e-mail: mevievoconst@gmail.com

Version October 2020 / Errors and omissions excepted.

GEOCELL PANEL

A HIGH QUALITY PRODUCT MADE FROM WASTE GLASS