MORE REASONS
TO FEEL GOOD

LOAD-BEARING
INSULATION FOR
GROUND SLABS

GEOCELL FOAM GLASS GRAVEL
TECHNICAL DATA

VERSION February 2018

GEOCELL
FOAM GLASS GRAVEL

A HIGH QUALITY GLASS PRODUCT

Technical data and characteristics of GEOCELL

load-bearing insulation material – DIBT Approval Z – 23.34 – 1579
load-bearing bulk material – DIN EN 13055-2 CE

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	≤ 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 compression test (5)	$\sigma_{10\%}$	≥ 570,00	kN/m²
Compressive strength of each grain	p	≥ 2,00	N/mm²
Internal friction angle (at compaction 1 : 1,3) (6)	Φ	45 - 48	°
Cohesion (calculation value)	c	0,00	kN/m²
Apparent cohension (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)		GEOCELL® is verifiably frost resistant	
Diffusion properties	μ	diffusible	
Capillarity (8)		GEOCELL® is anti-capillary against rising water	
Fire resistance		A1: incombustible component according DIN 4102-1	
Resistant to environmental influences		GEOCELL® is durable, rodent-, bacteria-, and rot-resistant	
pH-value	7		

There are no restrictions on the use of GEOCELL® 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 GEOCELL® 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 ratio

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

The technical guidelines for the application and installation of GEOCELL® foam glass is based on the previous experiences and the current status of technology. They are not case related. Thereofre 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 broschure nor through the advice of our tecnical engineers extended.

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