



# MORE REASONS TO FEEL GOOD

LOAD-BEARING  
INSULATION  
FOR GROUND SLABS



TECHNICAL DATA  
VERSION JULY 2015



**GEOCELL**  
FOAM GLASS GRAVEL

A HIGH QUALITY RECYCLING GLASS PRODUCT

# TECHNICAL DATA

## GEOCELL® FOAM GLASS GRAVEL

APPROVALS		STANDARD
Building Material Approval		DiBt Z-23.34-1579
THERMAL CONDUCTIVITY		
Thermal Conductivity (dry) <sup>(1)</sup>	$\lambda_{90}$	<0,08 [W/mK] DIN EN 12939v
Thermal Conductivity (Design Value)	$\lambda_{bem}$	0,11 [W/mK]
LOAD CAPACITY		
Design value of compressive strength at compaction factor 1:1,3 <sup>(2)</sup>	$\sigma_{cd}$	275 [kN/m <sup>2</sup> ] DIN EN 1054/1055
Compressive strength (10% compression) <sup>(3)</sup>	$\sigma_{10\%}$	≥570 [kN/m <sup>2</sup> ] DIN EN 826
GENERAL DATA		
Delivery		bulk or BigBags DIN EN 18123
Density (dry bulk) <sup>(4)</sup>		approx. 150 [kg/m <sup>3</sup> ] DIN EN 1097-3
Granular size	K	approx. 10-60 [mm] DiBt Z-23.34-1579
Internal water absorption	$w_i$	0,00 [Vol%] factory data
Water adsorption <sup>(5)</sup>	$w_a$	<10,00 [Vol%] (reversible) factory data
Friction angle (at compaction 1:1,3) <sup>(6)</sup>	$\Phi$	45-48° factory data
Cohesion (design value)	C	0 [kN/m <sup>2</sup> ] factory data
Apparent cohesion (design value)	$C_s$	0 [kN/m <sup>2</sup> ] factory data
Design value for shear stress <sup>(7)</sup>	$\Phi$	35°
Water permeability	$K_f$	~ 4,4 * 10 <sup>-2</sup> [m/s]
Condensation		prevents condensation in the building component
Freeze-thaw <sup>(8)</sup>		frost resistant factory data
Diffusion properties	$\mu$	diffusible factory data
Gassing with heat		no gas emission, odor free factory data
Capillarity <sup>(9)</sup>		anti-capillarity against rising water factory data
Fire resistance		incombustible class A1 DIN 4102-1
Resistance to environmental influences		anti-aging, rodent-, bacteria- and rot-resistant factory data
Material radiation		no radiation or odors factory data
Alkali resistance		long-term stability, no damage to concrete factory data
Environmental impact		considered unpolluted excavation. Eluate test met. Meets BbodSchG guidelines.

(1) according to the General Technical Approval: testing of the thermal conductivity according to DIN EN 12667 and DIN EN 12939

(2) allowable compressive stress in compliance with global safety factors for verification according to DIN 1054, 1976-11

(3) as specified by the General Technical Approval: Uniaxial compression test according to DIN EN 826 (1996-05)

(4) Taking into account the weight proportion of adsorbed water on the grain surface

(5) free and bound water at the particle surface

(6) factory data

(7) horizontal forces introduced into the insulating material may not exceed 20% of the design value of normal stress.

(8) According to the guidelines of the General Technical Approval Z - 23.34 - 1579 dd. 26/02/09 the manufacturer of GEOCELL is requested to measure freeze-thaw fluctuating (DIN 52 104-1) on a regular basis

(9) capillary property of the material is obtained even after compression due to existing voids

**Note:** For processing GEOCELL cellular glass gravel please refer to our guideline 01/2010, May 2010.

GEOCELL® FOAM GLASS GRAVEL

THE ECOLOGICAL ALTERNATIVE FOR ALL FOUNDATIONS.

CE EN-13055-2

APPROVED QUALITY

DIBT-ZULASSUNG Z-23.34-1579

LABELED WITH THE  
AUSTRIAN ECOLOGIC LABEL



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