



FOAMGLAS® PERINSUL HL (High load)

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Date: 25.04.2014

Supersedes: 01.10.13

www.foamglas.com



FOAMGLAS® PERINSUL HL is a very high density speciality product used to eliminate structural thermal bridging. The upper and the lower surface of the insulation are bitumen coated and laminated with glass reinforced fleece, compatible with mortar. The upper side is green.

Form of delivery (content per package)

thickness x length [mm]	50 x 450 mm					
width [mm]	115	140	175	240	300	365
units	28	23	16	12	10	9
linear running metre [m]	12,60	10,35	7,20	5,40	4,50	4,05
thickness x length [mm]	80 x 450 mm				100 x 450 mm	
width [mm]	250	300			240	300
units	6	5			7	5
linear running metre [m]	2,70	2,25			3,15	2,25
thickness x length [mm]	115 x 450 mm					
width [mm]	115	140	175	240	365	
units	12	9	8	5	4	
linear running metre [m]	5,40	4,05	3,60	2,25	1,80	

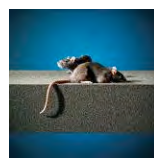
Other dimensions are available on request.

General FOAMGLAS® Cellular Glass Insulation characteristics

Description	: FOAMGLAS® Insulation is manufactured from specially graded recycled glass ($\geq 60\%$) and natural raw materials which are available in abundant supply (sand, dolomite, lime...). The insulation is totally inorganic, contains no ozone depleting propellants, flame resistant additives or binders. Without VOC or other volatile substances.
Reaction to fire (EN 13501-1)	: Core material complying with Euroclass A1, non-combustible, no toxic fumes
Service temperature limits	: from -265°C to $+430^{\circ}\text{C}$
Water vapour resistance (EN ISO 10456)	: $\mu = \infty$
Hygroscopicity	: zero
Capillarity	: zero
Melting point (cf DIN 4102-17)	: $>1000^{\circ}\text{C}$
Thermal expansion coefficient (EN 13471)	: $9 \times 10^{-6} / \text{K}$
Specific heat (EN ISO 10456)	: $1000 \text{ J}/(\text{kg}\cdot\text{K})$
FOAMGLAS® characteristics	:



Waterproof



Resistant to attack



High compressive strength



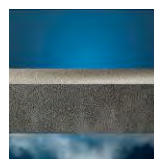
Acid resistant / chemical resistant



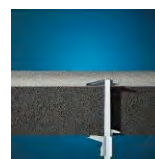
Easy cut to shape



Non-combustible



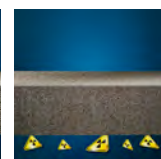
Impervious to water vapour



Dimensionally stable



Ecological



Radon protection



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1. Product characteristics conforming to EN 13167 ¹⁾ and ETA ²⁾

Density (± 15%) (EN 1602)	: 200 kg/m ³
Thickness (EN 823) ± 2 mm	: 50, 80, 100, 115 mm
Length (EN 822) ± 2 mm	: 450 mm
Width (EN 822) ± 2 mm	: 90 to 365 mm
Thermal conductivity (EN ISO 10456)	: $\lambda_D \leq 0.058 \text{ W/(m}\cdot\text{K)}$
Reaction to fire (EN 13501-1)	: Euroclass E (Core material Euroclass A1)
Point load (EN 12430)	: PL $\leq 1.0 \text{ mm}$
Compressive strength (EN 826 annex A) ¹⁾	: CS $\geq 2.75 \text{ MPa}$

¹⁾ CE-marking ensures conformity with the mandatory essential requirements of CPD as mentioned in EN 13167; within the CEN Keymark certification all mentioned characteristics are certified by an empowered, notified and accredited 3rd party.

²⁾ As EN 13167 is limited to a compressive strength of 1.6 N/mm², an ETA approval with higher Compressive strength is realized. Also the requirements of EN 1996-1-1 (Eurocode 'Masonry') for ETA test procedures are included.

2. Additional product data

Thermal diffusivity at 0°C	: $3.5 \times 10^{-7} \text{ m}^2/\text{sec}$
Product Conformity	: BS EN 13167 : 2001
Compressive strength CS-mean	: CS _{mean} $\geq 2.9 \text{ MPa}$
per unit capped with mortar (EN 772-1) ³⁾	
Compressive strength of masonry f _k ³⁾	: KZ : limestone: 1.80 MPa
	: P : full ceramic stone: 1.60 MPa
	: SB : ceramic fast block: 1.50 MPa

Flexural modulus of elasticity : E = 1500 MN/m²

³⁾ Tested in conformity with EN 1996-1-1 (Eurocode 6 'Masonry') and some test specimen in conformity with EN-1052-1 in MPa or N/mm².

3. Application area

- Floor-wall base element to eliminate structural thermal bridging
- Parapet walls