

		<p>Eco-friendly lightweight block based on secondary raw materials (geopolymer binder and recycled aggregate); it can be used for non-bearing walls and when thermal insulation is required.</p>	
Name of product	GEO block_P-21		
Function of product	Lightweight building block		
Form	Block		
Raw Material	Binder: Pulverised Fuel Ash (PFA), Ground Granulated Blast furnace Slag (GGBS); Aggregate: recycled polyurethane (PU) foam		
Properties			
Property	Unit	Value	Test methods/standardisation
Chemical/physical properties			
Bulk density*	kg/m ³	1184	-
Composition of materials	PFA: SiO ₂ , Al ₂ O ₃ , CaO; GGBS: CaO, SiO ₂ , Al ₂ O ₃ , MgO PU: rigid polyurethane foam		
Structures and construction			
Dimensions of product	m	0.39x0.19x0.19	
Mechanical properties			
Compressive strength*	N/mm ²	15.1	EN 12390-3
Flexural strength*	N/mm ²	2.1	EN 12390-5
Tensile strength	N/mm ²		
Thermal properties			
Thermal conductivity*	W/(m·K)	0.205	EN 12664
Specific heat capacity*	J/(g·K)	1,911	-
Thermal storage capacity*	kWh/m ³	9,374	-
Thermal transmittance**	W/m ² K	1.34 ± 0,06	EN ISO 8990
Hygrothermal properties			
Water vapour diffusion resistance factor			
Moisture buffer value	kg/(m ² ·%RH)		
Water vapour permeability	kg/(m·s·Pa)		
Acoustic properties			
Sound absorption coefficient	%		
Sound Reduction Index (Rw)**	dB	35	
Sound insulation (D2m,nT,Atr)**	dB	31.4	EN ISO 140-5
Fire Safety			
Reaction to fire			
Resistance to fire	Minutes		
Fire behaviour	-	E160, E90	UNI EN 1363-1, UNI EN 1364-2, UNI EN 13501-2
Environmental properties			
Embodied energy (% renewable)*	MJ/m ³	2958.2	ISO 14000, ISO 14040, ISO 14044
GHG emissions*	kg CO ₂ eq/m ³	127.0	
TVOC (SVOC)	µg/m ³		
Radon	Bq/m ³		
Photocatalytic capacity			

* property referred to the concrete

** including mortar and paint