



Product Information Sheet

March 2014

Cellular Glass Block (Insulation)

Description

Cellular glass block (CGB) is an alumina-silicate cellular glass foam board with an exfoliated glass structure. The silicate composition provides excellent chemical protection, whilst the cellular structure minimises density and thermal conductivity.

Typical Uses

CGB is typically employed as an acid resistant insulating layer due to its stable composition, chemical structure, low density and low thermal conductivity. It has excellent resistance to sulphuric acid at all concentrations. It can be either dry laid or bonded with silicate or epoxy mortar, and behind monolithic castable of brick/tile constructions

Advantages

The low density and low thermal conductivity make this an ideal insulating material to ensure improved temperature control. Coupled with this, the corrosive resistant properties make this product an excellent material for gaseous environments where more dense materials are not feasible.

Chemical Resistance

Full details are available on ACCS website: www.protectivelinings.co.uk. ACCS Cellular Glass Block is silica-based and is therefore not designed for hydrofluoric environments

Surface Preparation

For all pre-existing surfaces of concrete, abrasive blast or scarify to remove all laitance and surface contaminants.

The surface should be dust-free and dry and the ambient temperature should be above the dew point of air.

It is usually recommended that a primer material is applied to the substrate prior to installation of CGB to provide adequate adhesion and a sealant to the substrate. Please contact ACCS for further details.

Application

Once the substrate has been prepared, the CGB blocks can be installed using corrosion resistant mortars or adhesives. It is generally recommended that the back face (against the substrate) always requires a mortar bed of <4mm in thickness. The joints between CGB blocks can be either 'dry butt' jointed (i.e. no mortar), or have varying thicknesses of acid

resistant mortar <4mm in thickness as the pointing. In all cases, the mortar applied must be fully 'buttered' on the CGB to ensure complete coverage of the CGB and substrate surface. The mortar/adhesive utilised can be a silicate, furan or epoxy based material and is determined by the process environment. Please contact ACCS for further information.

The CGB blocks are very friable and care should be taken during storage, handling, installation and upon completion. However, due to their friability, a simple wood saw is sufficient for reshaping CGB blocks during installation.

Coverage

Nominal CGB sizes are:

Length	Width	Thickness
610 mm	457 mm	<200 mm

Standard Packing

ACCS CGB can be provided in unit size cardboard box form or palletised form. Volume and numbers are specific to CGB type.

Storage

Store in a cool, dry, frost-free place. Normal storage conditions in up to 25°C should provide indefinite shelf life. The CGB is extremely friable and should not have any weight stacked on top of it. Do not double stack pallets or any other materials on top of it. Take extreme care during handling.

Safety

Safety data information available on request. Adequate ventilation must be provided whilst work is in progress and is compulsory for closed or indoor applications. The instructions on storage, fire and explosion are to be observed. No releases to the sewers or drains are to be permitted under any circumstances. Always refer to MSDS data sheets for hazard and transport information.

Warranty

We warrant that our products will conform to the description contained in the order and that we have good title in all goods sold. WE PROVIDE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE, OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSED SET FORTH HEREIN. We are glad to offer suggestions or to refer you to customers using



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consequential damages. Our liability and your exclusive remedy hereunder or otherwise, in law or in equity, shall be expressly limited to our replacement of non-conforming goods at our factory or, at our sole option, to repayment of the purchase price of non-conforming goods.

Technical Data

Parameter	Test Method		CGB 800	CGB 1000
Density ($\pm 10\%$ Tolerance)	ASTM C165	kg/m ³	120	130
Thermal Conductivity ($\pm 10\%$ Tolerance)	ASTM C203	W/m ⁰ k	0.043	0.044
Compressive Strength	ASTM C240-85	kPa	800	1000
Chloride Content		ppm	<2	
Water absorption		Vol%	≤ 0.5	
Tensile Strength	EN1607	kPa	>100	
Coefficient of Thermal Expansion	E96	/ ⁰ K	9×10^{-6}	
Service Temperature		⁰ C	-268 to +480	
Softening Point	Glass softening point ~ about 730 ⁰ C			
Hygroscopicity	Zero			
Permeability	Zero			
Capillarity	Zero			
Resistance to Acids	Impervious to common acids and their fumes			
Combustibility	Non combustible			
ACCS CGB conforms to and exceeds ASTM C552				

Disclaimer

The technical data contained in this document represents the current state of our product knowledge and is for information purposes only. It does not constitute a guarantee or specification.