

This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

Mike Wye & Associates Ltd - GEOCELL

Description of Product

This is an assessment of GEOCELL an aerated foam glass gravel manufactured from 100% recycled waste glass. It is used in construction as a load bearing sub-base, and in floor systems for low energy housing.



Key Factors Assessed

- Mechanical Resistance & Stability
- Health, Hygiene and Environmental
- Safety in Use
- Energy Economy and heat retention
- Durability serviceability and identification

Validity

This certificate was first issued on 24th August 2016 and is valid until 24th August 2020.
Issue Dated 4th August 2017

Scope of Registration

This Registered Detail applies to an aerated foam glass gravel manufactured from 100% recycled waste glass. It is used in construction as a load bearing sub-base, and in floor systems for low energy housing and can be laid loose or bound.

GEOCELL® is 100 % mineral and combines low density with a high compressive strength. In addition to thermal and sound insulating properties, it is also resistant to moisture, fire, chemicals and aging.

Minimum compacted thickness of GEOCELL 10/30 is 100mm.

Minimum compacted thickness of GEOCELL 10/60 is 150mm.

Compaction ratio i.e. loose material to compacted state is 1.3 : 1 and should always be installed in compliance with manufacturer's instructions. This registered detail relates to the use of the complete GEOCELL flooring system as designed and supplied by Mike Wye & Associates Ltd for a specific project.

An initial site assessment must form part of the design and specification process to be carried out by Mike Wye and Associates or approved GEOCELL agents for the project, and if it identifies that the building is not suitable to receive the GEOCELL floor, then this registered detail should not be considered applicable.

When a ground bearing floor slab is replaced in an existing property, the building regulations require that it is replaced to an appropriate standard with regard to all of the applicable requirements of the regulations. These would include structural integrity, thermal insulation, resistance to ground moisture and resistance to contaminants such as radon gas, methane etc, since the work constitutes both a material alteration of the property, and the provision of a new thermal element where this is applicable. These can be onerous requirements, particularly in an older building and their application needs to be considered on a case by case basis to establish how the regulations should be applied. Early engagement of the building control body is important to ensure an appropriate solution is achieved. Relaxation of the standards of the Building Regulations will typically only be considered where there are reasons of building conservation or preservation.

Conditions of Certificate

Maximum compacted single layer thickness 300mm. For design thickness greater than 300mm, placing and compaction is to be undertaken in two or three layers and maximum thickness should never exceed 900mm.

It is not acceptable to excavate below the depth of the foundations of the existing walls when reducing levels to install the floor. In order to meet the regulations for insulation value, it may be necessary to consider alternative insulation products/flooring systems, to reduce the depth of excavation. A breathable floor is not able to resist the ingress of gasses such as radon and methane. In areas where there is a risk of contaminant gasses, consideration must be given to whether the regulations require that a gas tight membrane is added as part of the floor system and whether a de-gassing sump should be considered below the new floor. This would remove the ability of the system to act as a breathable floor.

Whilst the GEOCELL system has a non-capillary nature and will not draw ground moisture, it is not impervious and will therefore not resist ingress of water resulting from high water levels or poor drainage. There must be adequate precautions to prevent the build-up of water below the slab. The use of GEOCELL® in the capillary fringe of groundwater or water source areas, is not recommended and its use determined through an initial site assessment. Install drainage system/capillary moisture barrier if required. The new floor construction should not need to alter the character or appearance of the building. Therefore, even in a listed building, there is no automatic allowance for a reduction in insulation value below that required for new thermal elements in Part L of the regulations. Consider whether the full elemental requirement of Part L can be achieved using the GEOCELL system. The design should include a U-value assessment as supporting information. If the elemental requirement cannot be met, then more efficient insulating products should be considered before assessing whether it is necessary or acceptable to reduce the standard of insulation.

Particularly where a reduced insulation value has been considered necessary, the increased energy losses that occur from a heated ground bearing slab may dictate that under-floor heating is not acceptable.

LABC consider that, GEOCELL if used in accordance with the provisions of this Certificate, will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met;



The Building Regulations 2010 (as amended) England & Wales

Regulation 7	Materials and workmanship
Note:	The products are acceptable.
AD A	Structure
Note:	Subject to limitations detailed below in Conditions section.
AD C	Site preparation and resistance to contaminants and moisture
Note:	Subject to limitations detailed below in Conditions section.
AD L1B	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the floor structure.



The Building Regulations 2010 (as amended) England

AD L1A	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the floor structure.



The Building Regulations 2010 (as amended) Wales

AD L1A	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the floor structure.



The Building (Scotland) Regulations 2004 (as amended)

If you would like to discuss a specific use of the product in Scotland it will require an additional assessment under the Scottish Building Regulations and accordingly you should contact the LABSS STAS Administrator at www.labss.org

Non-Regulatory Information



LABC Warranty

The use of the GEOCELL System has not been assessed to meet the requirements of the LABC Warranty Technical Manual. If you would like to discuss a specific use please make an enquiry to technical.services@labcwarranty.co.uk

Supporting Documentation

GEOCELL CE 2573 Certificate

GEOCELL More Reasons to feel good – Loadbearing Insulation for Ground Slabs

GEOCELL Installation Instructions July 2015

GEOCELL Technical Data Version July 2015

DiBt Zulassung Z-23.34-1579

Contact Information

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