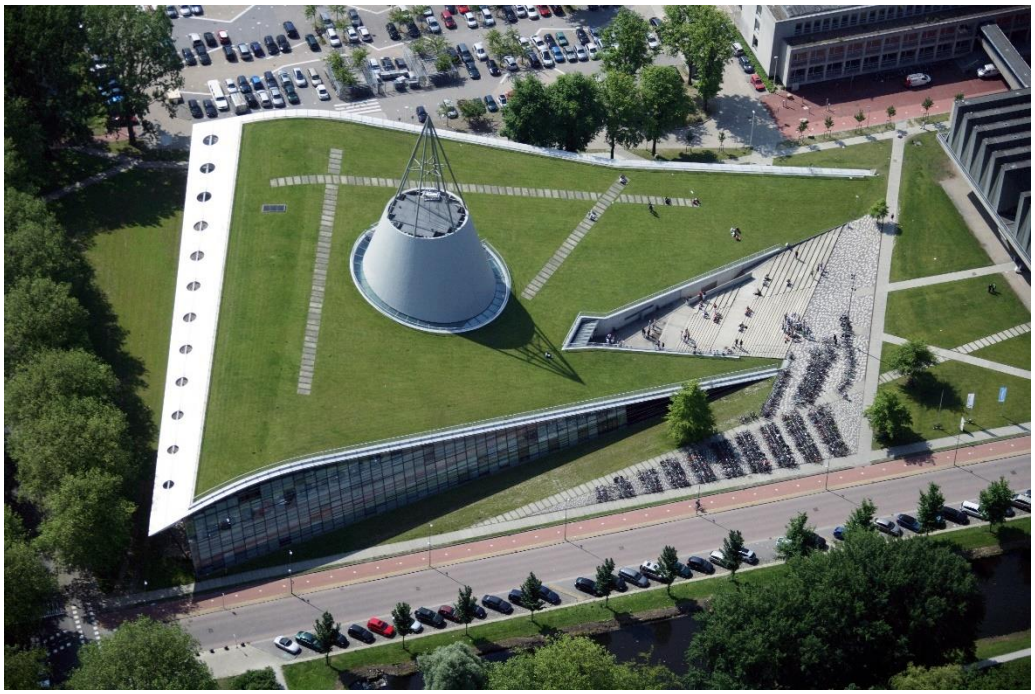
FOAMGLAS® products in BREEAM certifications

BREEAM New Construction 2016 and Version 6 (NC) & Non-domestic Refurbishment 2015 (RFO) material requirements



04.10.2022

PREFACE

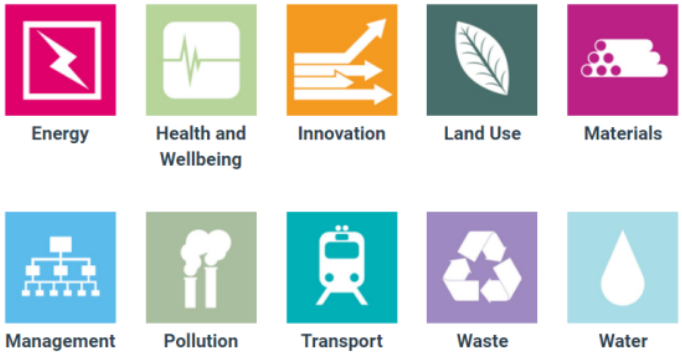
This document is an assessment of the compliance of FOAMGLAS® products with BREEAM environmental rating system requirements. The aim is to present the environmental qualities of FOAMGLAS products as well as highlight the essential FOAMGLAS® sustainable best practices. The features have been presented in a way that contributes to meeting the requirements of global environmental certifications.

This document applies to following FOAMGLAS products produced in Tessenderlo, Belgium and Klasterec, Czech Republic.

- T3+, T4+, S3, F

The following environmental rating systems for buildings are assessed:

- BREEAM International New Construction 2016 (NC 2016)
- BREEAM International New Construction Version 6 (NC v6)
- BREEAM International Refurbishment and Fit-Out 2015 (RFO 2015)



The document focuses on providing information on how well FOAMGLAS® products follow BREEAM's guidelines in different categories. Especially in categories Materials (MAT 01 & MAT 03), Waste (WST 01), Health and wellbeing (HEA 02), Energy (ENE 04). Additionally, FOAMGLAS® products do have a contribution towards MAT06 Material efficiency, where the goal is to improve the material efficiency of the building and towards ENE 01 Reduction of energy use and carbon emissions, where the goal is to manage building's CO2 emissions from energy consumption and towards ENE 05 Energy efficient cold storage, where the goal is to reduce greenhouse gas emissions from refrigeration systems and towards HEA 04 Thermal comfort, where the goal is to ensure appropriate thermal comfort levels and towards HEA 05 Acoustic performance, where the goal is to ensure the building's acoustic performance and towards LE 04 Enhancing site ecology, where the goal is to enhance the ecological value of the site. Separate documents are not required to prove these categories' requirements.

All the necessary approvals and certificates can be found on the website www.foamglas.com or be provided upon request via the local customer service team.

TABLE OF CONTENTS

GENERAL CONTRIBUTION 4
CREDITS THAT REQUIRE DOCUMENTATION OF FOAMGLAS® PRODUCTS 6
MATERIALS 6
MAT 01 LIFE CYCLE IMPACTS 6
MAT 03 RESPONSIBLE SOURCING OF CONSTRUCTION PRODUCTS 7
WASTE 8
WST 01 CONSTRUCTION WASTE MANAGEMENT 8
HEALTH AND WELLBEING 9
HEA 02 INDOOR AIR QUALITY 9
ENERGY 11
ENE 04 LOW CARBON DESIGN 11
CREDITS THAT DON'T REQUIRE DOCUMENTATION OF FOAMGLAS® PRODUCTS 12
HEALTH AND WELLBEING 12
ENERGY 12
MATERIALS 13
LAND USE AND ECOLOGY 13

GENERAL CONTRIBUTION

The table below shows BREEAM assessment categories that FOAMGLAS® products contribute. In some credits the criteria's requirements can't be met with only one product, or credit awarding depends on many other aspects without any link on the products. Therefore, the ''Total credits available'' on the level of a building, is the same or higher than only the number of credit contributions by using FOAMGLAS® products.

MATERIALS

	Total credits available	Contribution
MAT01 Life cycle impacts	6 (+1)	1 (+1)
MAT03 Responsible sourcing of construction products	4 (+1)	2 (+1)
MAT06 Material efficiency	1	1

WASTE

	Total credits available	Contribution
WST01 Construction waste management	6 (+1)	2

HEALTH & WELLBEING

	Total credits available	Contribution
HEA02 Indoor air quality	7	1 (+1)
HEA04 Thermal comfort	3	1
HEA05 Acoustic performance	4	1

ENERGY

	Total credits available	Contribution
ENE01 Reduction of energy use and carbon emissions	23	1
ENE04 Low carbon design	6	1
ENE05 Energy efficient cold storage	3	1

LAND USE AND ECOLOGY		Total credits available	Contribution
	LE 04 Enhancing site ecology	3	1

Note: The +1 in the table means that there is an exemplary performance credit available if the credits exemplary level criterion is met.

CREDITS THAT REQUIRE DOCUMENTATION OF FOAMGLAS® PRODUCTS

Materials

MAT 01 LIFE CYCLE IMPACTS

FOAMGLAS® practices in brief

- **EPDs as per ISO 14025 and EN 15804**
- EPD contains information on a comprehesive set of environmental indicators, e.g. **CO_2, CFC-11 and phosphate** emissions

BREEAM INTERNATIONAL NC 2016, VERSION 6 & RFO 2015

FOAMGLAS® contribution	**EPDs are per ISO 14025 and EN 15804 and therefore, using FOAMGLAS® products may contribute to achieving credits in this section.**
Assessment	One credit can be achieved if at least 5 products used in the building construction have an EPD that is in accordance with either ISO 14025, ISO 21930 or EN 15804. A maximum of 2 EDPs per product group may be included in the calculations. The exemplary level credit can be achieved when the Mat01 calculator has been completed and at least 10 products used in the building construction are in accordance with at least one of the before mentioned standards. Again, a maximum of 2 EDPs per product group may be included in the calculations.
Documents	Product specific EPDs from company website

FOAMGLAS® PRACTICES IN DETAIL

- FOAMGLAS® EPDs follow the ISO 14025 and EN 15804 standards. Their products T4+, T3+, F and S3 have EPD. The EPDs have been based on the 1 kg of FOAMGLAS® product.
- EPD's are on 4 different program operator databases (France, Germany, Belgium, and Netherlands)

MAT 03 RESPONSIBLE SOURCING OF CONSTRUCTION PRODUCTS

FOAMGLAS® practices in brief

- **Self-reporting according to GRI** (Global Reporting Initiative) guidelines
- **ISO 14001 and ISO 9001** certifications for all production sites

BREEAM INTERNATIONAL NC 2016, VERSION 6 & RFO 2015

FOAMGLAS® contribution	ISO 14001 -certification contributes to achieve credits from MAT03 Responsible sourcing of construction products.
Assessment	The credit requires responsible sourced products. ISO 14001 contributes to achieve 1 point or 2 points in Mat 03 Responsible Sourcing of Materials" calculator. 2 points in the calculator are achieved if the producers main ingredients also have ISO 14001 -certification. The minimum requirement for this credit is achieve ≥ 10 % responsible sourcing points in NC 2016 and ≥ 18 % in RFO 2015. ISO 14001 is the minimun requirement for the products. ≥ 10 % will be achieved when all of the timber is responsible sourced and 80% of the products in the three product groups have been procured responsibly. The minimum requirement secures one credit. FOAMGLAS® products belongs to product group ''Glass''. In NC system additional 1-2 points or exemplary credit can be awarded if ≥ 20 % or 36 % or 54 % responsible sourcing points are achieved. In RFO system additional 1-2 points or exemplary credit can be awarded if ≥ 36 % or 54 % or 70 % responsible sourcing points are achieved.
Documents	ISO 14001 -certification from company's website

FOAMGLAS® PRACTICES IN DETAIL

- When it comes to corporate sustainability reporting (CSR), Owens Corning corporation does self-reporting and follows the guidelines of GRI (Global Reporting Initiative) providing information on the company's sustainable practices and principles
- FOAMGLAS® factors in Belgium and Czech Republic have ISO 14001, 9001, 45001 and 50001 certifications
- FOAMGLAS® products are containing more than 50 % recycled content

Waste

WST 01 CONSTRUCTION WASTE MANAGEMENT

FOAMGLAS® practices in brief

- FOAMGLAS® products are **reusable and recyclable**

BREEAM INTERNATIONAL NC 2016, VERSION 6 & RFO 2015

FOAMGLAS contribution	**FOAMGLAS® products are recyclable and reusable and therefore can help the constructor to meet their recycling targets. FOAMGLAS® insulation products fulfil the criteria for the key waste group "insulation".**
Assessment	Construction site or demolition waste has to be separated into at least five key waste groups. Insulation products are concidered as one of these key groups. Actual points are awarded based on the final recycling rate of all waste accumulated on-site during the construction or demolition process.
Documents	No documents needed

FOAMGLAS® PRACTICES IN DETAIL

- FOAMGLAS® products can be reused on the sit or send back to the manufacturer for recycling
- In case of renovation, an existing layer of FOAMGLAS® products can be used as a substrate for new layer of FOAMGLAS® product

Health and Wellbeing

HEA 02 INDOOR AIR QUALITY

FOAMGLAS® practices in brief

- **Natureplus and French A+ certifications for T3+, T4+, S3, F**

BREEAM INTERNATIONAL NC 2016 & VERSION 6

FOAMGLAS® contribution	**FOAMGLAS® products have the Natureplus classification which is compliant with the credit requirement. French A+ meets the requirement for TVOC and formaldehyde.**
Assessment	Ceiling, wall, and acoustic and thermal insulation materials must fulfil the following criteria: - Formaldehyde max. 0.06 mg/m^3 - TVOC (total volatile organic compounds) max 1.0 mg/m^3 - 1A and 1B carcinogens max 0.001 mg/m^3
Documents	Natureplus classification document from company's website French A+ classification document from company's website

BREEAM INTERNATIONAL RFO 2015

FOAMGLAS® contribution	**FOAMGLAS® products have the Natureplus and French A+ certifications which are compliant with the credit requirement. Both of the certifications also meets the exemplary level requirement.**
Assessment	Suspended ceiling tiles must fulfil the following criteria: - Formaldehyde E1 class - Formaldehyde level of 0.1 mg/m³ Natureplus classification fulfils the criteria listed above.
Documents	Natureplus classification document from company's website French A+ classification document from company's website

FOAMGLAS® PRACTICES IN DETAIL

- FOAMGLAS® products T3+, T4+, S3, F have German Natureplus and French A+ classifications

Energy

ENE 04 LOW CARBON DESIGN

FOAMGLAS® practices in brief

- **FOAMGLAS®' insulation products can improve passive ways to decrease building's energy demand**

BREEAM INTERNATIONAL NC 2016, VERSION 6 & RFO 2015

FOAMGLAS® contribution	**FOAMGLAS® have products for thermal insulation. Their products can improve passive ways to decrease building's energy demand and help to accomplish the requirement of passive design that reduce energy demand.**
Assessment	The possibilities of implementing design solutions that reduce the energy demand of a building are identified. The building uses passive design measures to reduce the overall building energy demand, primary energy consumption or CO_2 emissions by at least 5 %, in line with the findings of the passive design analysis.
Documents	No documents needed

FOAMGLAS® PRACTICES IN DETAIL

- FOAMGLAS® products' features:
  - T3+: Thermal conductivity: ≤ 0,036 W/(m·K), Thickness: 50–200 mm
  - T4+: Thermal conductivity: ≤ 0,041 W/(m·K), Thickness: 40–200 mm
  - S3: Thermal conductivity: ≤ 0,045 W/(m·K), Thickness: 40–200 mm
  - F: Thermal conductivity: ≤ 0,050 W/(m·K), Thickness: 60–180 mm

CREDITS THAT DON'T REQUIRE DOCUMENTATION OF FOAMGLAS® PRODUCTS

FOAMGLAS® products have a general contribution towards following categories and credits. Products can be used in systems that have effect on the credit but by themselves have no effect whether the credit is achieved or not. Therefore, no documentation is needed to prove credit compatibility.

HEALTH AND WELLBEING

HEA 04 – Thermal comfort

Aim is to ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.

FOAMGLAS® products can be used as a part of building envelope, which influences the thermal conditions of the building, and therefore effect on the credit calculations.

HEA 05 – Acoustic performance

Aim is to ensure the building's acoustic performance, including sound insulation meets the appropriate standards for its purpose.

FOAMGLAS® products can also be used as an acoustic insulation material.

ENERGY

ENE 01 – Reduction of energy use and carbon emissions

Aim is to recognise and encourage buildings to minimise operational energy demand, primary energy consumption and CO_2 emissions.

FOAMGLAS® products can be used as a part of building envelope, which influences the thermal conditions of the building, and therefore effect on the credit calculations.

ENE 05 – Energy efficient cold storage

Aim is to recognise and encourage the installation of energy efficient refrigeration systems, therefore reducing operational greenhouse gas emissions resulting from the system's energy use.

FOAMGLAS® products can affect positively to refrigeration systems' energy use by their insulation features.

MATERIALS

MAT 06 – Material efficiency

Aim is to recognise and encourage measures to optimise material efficiency in order to minimise the environmental impact of material use and waste without compromising on structural stability, durability or service life of the building.

FOAMGLAS® insulation solutions are good choice in terms of material efficiency, thanks to their recyclability and content of recycled materials.

LAND USE AND ECOLOGY

LE 04 – Enhancing site ecology

Aim is to encourage actions taken to enhance the ecological value of the site as a result of development.

Thanks to its loadbearing properties as well as its fully waterproof behaviour, FOAMGLAS® insulation solutions are the most secure insulation support to achieve enhanced site ecology as part of the green roof system.