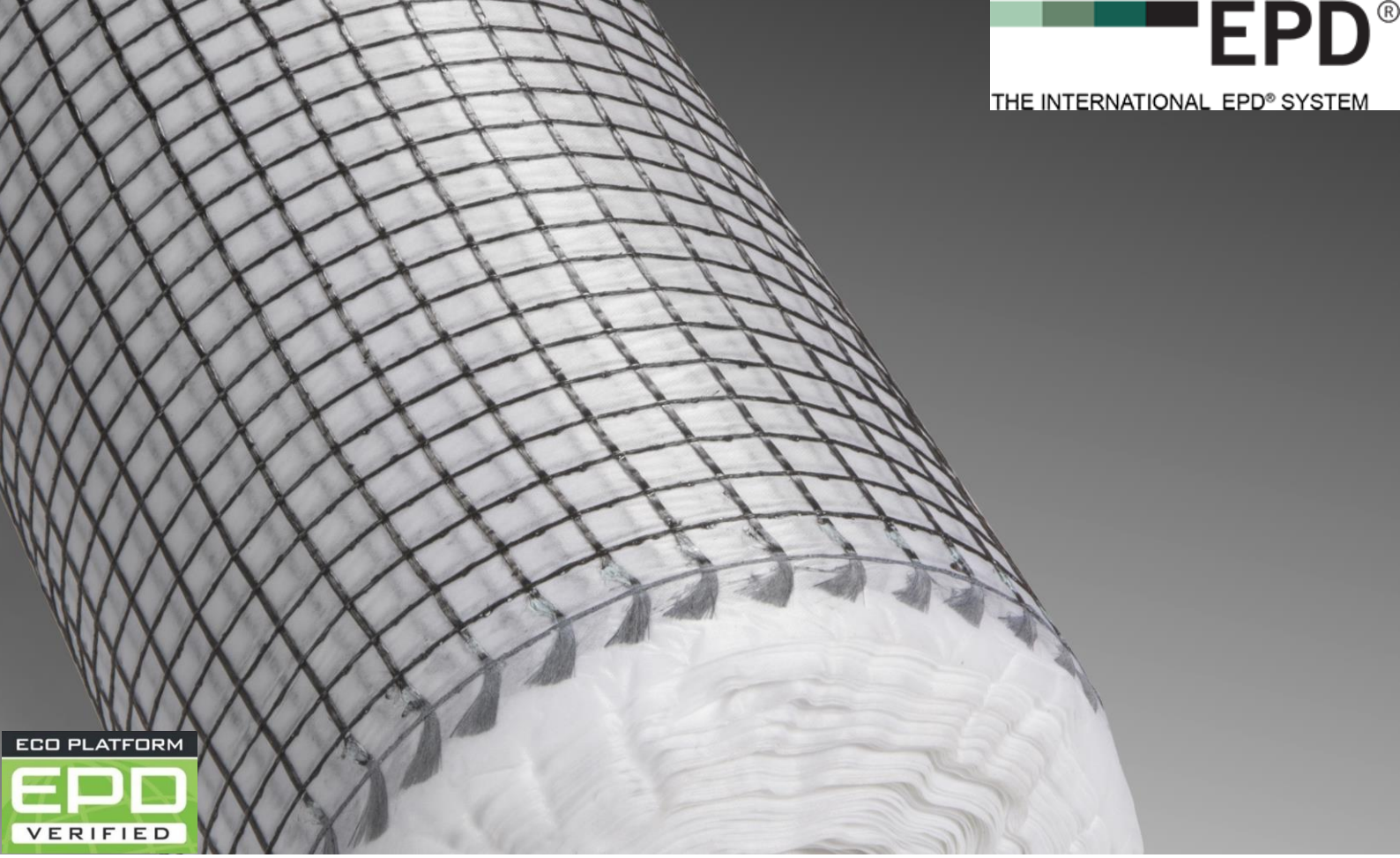


ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025:2006 and EN 15804+A2:2019/AC:2021 for

GlasGrid CG 50L

from: Saint-Gobain ADFORS CZ, s.r.o

Version 1
Publication date: 2025-05-27
Validity: 5 years
Valid until: 2030-05-26

Scope of the EPD®: Europe

Programme: The International EPD® System, www.environdec.com

Programme operator: EPD International AB

Production plant: Saint-Gobain ADFORS CZ, s.r.o; Sokolovská 106; 570 01 Litomyšl; The Czech Republic

Registration number
The International EPD® System:
EPD-IES-19586:001

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

General information

Company information

Manufacturer: Saint-Gobain ADFORS CZ, s.r.o – Sokolovská 106; 570 01 Litomyšl; The Czech Republic. https://eu.adfors.com/

Production plant: Sokolovská 106; 570 01 Litomyšl; The Czech Republic

Framework: The LCA is based on 2022 production data for one site in Litomyšl; The Czech Republic.

Geographical scope : Europe

UN CPC CODE: 54790 Other building completion and finishing services

Owner of the declaration: Saint-Gobain ADFORS CZ, s.r.o

Product name and manufacturer represented: GlasGrid CG 50L. Saint-Gobain ADFORS CZ, s.r.o

This EPD covers “cradle to grave” + module D = (A + B + C) + D as defined in EN 15804:2012 + A2:2019/AC:2021

EPD® prepared by: Jana Kalaskova (Saint-Gobain ADFORS CZ, s.r.o., (jana.kalaskova@saint-gobain.com) & William Guerin (Saint-Gobain ADFORS central team, william.guerin@saint-gobain.com)

The intended use of this EPD is for B2B communication.

EPD® registration number: EPD-IES-19586:001

Declaration issued: 2025-05-27, **valid until:** 2030-05-26

Demonstration of verification: an independent verification of the declaration was made, according to EN ISO 14025:2006. This verification was external and conducted by a third party, based on the PCR mentioned below.

Programme	The international EPD® System		
Adress:	EPD© International AB Box 210 60 SE-100 31 Stockholm Sweden		
Website:	www.environdec.com	**E-mail:**	info@environdec.com

CEN standard EN 15804:2012 + A2:2019/AC:2021 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): PCR 2019:14 Construction Products, version 1.3.4
PCR review was conducted by: "PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact".
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier
LCA Accountability: William Guerin – Saint-Gobain ADFORS
Third party verifier : Marcel Gomez Marcel Gómez Consultoria Ambiental Tlf 0034 630 64 35 93 - info@marcelgomez.com Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third part verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

Product Information

Product information and description of use

ADFORS GlasGrid product line offers several styles of pavement reinforcement grids designed to reinforce asphalt concrete overlays. They retard reflective cracking by a factor of 2 to 3 times by turning stresses horizontally to dissipate them. The grid configuration features fiberglass strands coated with an elastomeric polymer. Each strand has a remarkably high tensile strength, as well as a high modulus of elasticity at low elongation – making ADFORS GlasGrid stronger, by weight, than steel.

The fiberglass used as the main raw material for pavement reinforcement systems is produced by melting the glass raw materials in a kiln. As it molten, it passes through a heat-resistant platinum die and thin filaments of glass are formed, following this step, sizing is applied, and the formed yarn is winded and dried. Finally, it is used as a raw material together with binders to produce pavement reinforcement systems.

The ADFORS GlasGrid product range is used in roads, highways, parking lots, bridges, or airports. This product complies with the European standard EN 1538.

Technical characteristics for product GlasGrid CG 50L

Product	Tensile Strength (MD x XD) Ultimate (kN/m)	Tensile Elongation Ultimate (%)	Tensile Resistance @ 2% Strain (MD x XD) kN/m	Secant Stiffness EA @ 1M Strain (MD x XD) (N/mm)	Young's Modulus E (MPa)	Mass per unit area (g/m²)	Melting point coating (°C)
CG 50L	(55 x 55) - 5	2,5 ± 0,5	(46 x 46) ± 10	(2200 x 2200) ± 200	73000	222	> 232

The stated technical characteristic values and tolerances are obtained in our laboratories and in accredited testing institutions and refer to the LCA calculation period.

Declaration of the main product components and/or materials within GlasGrid CG 50L

Description of the main components and/or materials for 1 m² of GlasGrid CG 50L:

Product components	Weight (%)	Post-consumer recycled material (Weight %)	Biogenic Material (Weight % and kgC/m²)
Greige (glass + polyester yarns)	75 - 85	0	0 resp. 0
Polyester veil non-woven	5 - 10	0	0 resp. 0
Coating	10 -20	0	0 resp. 0
Product	**Weight (kg/m²)**		
GlasGrid CG 50L	**0,222**	**0**	**0 resp. 0**
Packaging materials	**Weight (kg/m²)**	**Weight%**	**Weight Biogenic carbon (kg C/kg)**
Low-density polyethylene (LDPE)	4,90E-03	2,21%	0
Polypropylene strip	7,00E-05	0,03%	0
Cardboard (core)	4,50E-03	2,03%	0,45
Paper (label)	1,43E-04	0,06%	0,43
Wooden Pallet	7,40E-04	0,33%	0,41

At the date of issue of this declaration, there is no "Substance of Very High Concern" (SVHC) in concentration above 0,1% by weight, and neither do their packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals).

The verifier and the program operator do not make any claim nor have any responsibility of the legality of the product.

LCA calculation information

EPD scope	Cradle to gate with options, modules C1-C4, module D and optional modules A4-A5 and B1-B7
Declared Unit	1 m² of GlasGrid CG 50L (0,222 kg/m²) installed and with an estimated useful life of 30 years
System boundaries	Cradle to gate with options (A+B+C+D)
Service life (SL)	The Service Life (SL) of the GlasGrid product is considered to be 30 years. This value is the one commonly used in the industry. However, the service life of the product may be less than its design life if the road is damaged or modified.
Cut-off rules	The LCI data shall include, in accordance with EN 15804:2012+A2:2019/AC:2021 and the extended cut-off rule of ISO 21930, which this PCR is following: a minimum of 95% of the total input flows (mass and energy) per module (e.g. A1-A3, A4-A5, B1-B5, B6-B7, C1-C4 and module D). Plausibility assessments and expert judgement may be used to demonstrate compliance with these criteria. The process energy and materials representing less than 1% of the whole energy and mass used can be excluded (if they do not cause significant impacts).
Allocations	Allocation has been avoided when possible and when not possible a mass allocation has been applied. The polluter pays and modularity principles have been followed.
Geographical coverage and period	Data included is collected from 1 production site in Litomyšl (The Czech Republic) Production year from 2022 Background data: Ecoinvent v3.10 (2024) and GaBi ts 2024

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

LCA scope

System boundaries (X=included. MND=module not declared)

	PRODUCT STAGE			CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY
	Raw material supply	Transport	Manufacturing	Transport	Construction-Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-recovery
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU27		CZ	EU27	EU27	EU27	EU27	EU27	EU27	EU27	EU27	EU27	EU27	EU27	EU27	EU27	EU27
Share of specific data	59%																
Variation products	0%																
Variation sites	0%																

A1-A3, Product stage

Description of the stage: the product stage of the GlasGrid CG 50L product is subdivided into 3 modules A1, A2 and A3 respectively “Raw materials supply”, “Transport to the manufacturer” and “Manufacturing”.

The aggregation of the modules A1, A2 and A3 is mandatory by the EN 15 804 standard. This rule is applied in this EPD.

Description of the scenarios and other additional technical information:

A1, Raw materials supply
This module considers the extraction and processing of all raw materials and energy which occur upstream to the studied manufacturing process. Specifically, the raw material supply covers production of glass fiber, coating components and the polyester yarn and non-woven veil.

A2, Transport to the manufacturer
The raw materials are transported to the manufacturing site. In our case, the modeling includes road (average values) of each raw material.

A3, Manufacturing
This module includes the manufacturing of the product and packaging. Specifically, it covers the manufacturing of GlasGrid CG 50L and the packaging.

ADFORS GlasGrid® is a composite material consisting of a solid fibreglass mesh bonded to a non-woven fabric. The mesh is produced by weaving, on a loom, fiberglass yarns. The glass fibres are coated with a modified polymer ensuring that the fibres are protected, there is sufficient lattice stiffness and optimal layer bonding. The lightweight non-woven fabric is then bonded to the mesh and is here to supports the efficient bonding of asphalt layers and provides high bitumen absorbency for fast and efficient laying. Once the mesh and the polyester fabric are bonded and cured, the product is rolled on a cardboard core and cut to desired width and length.

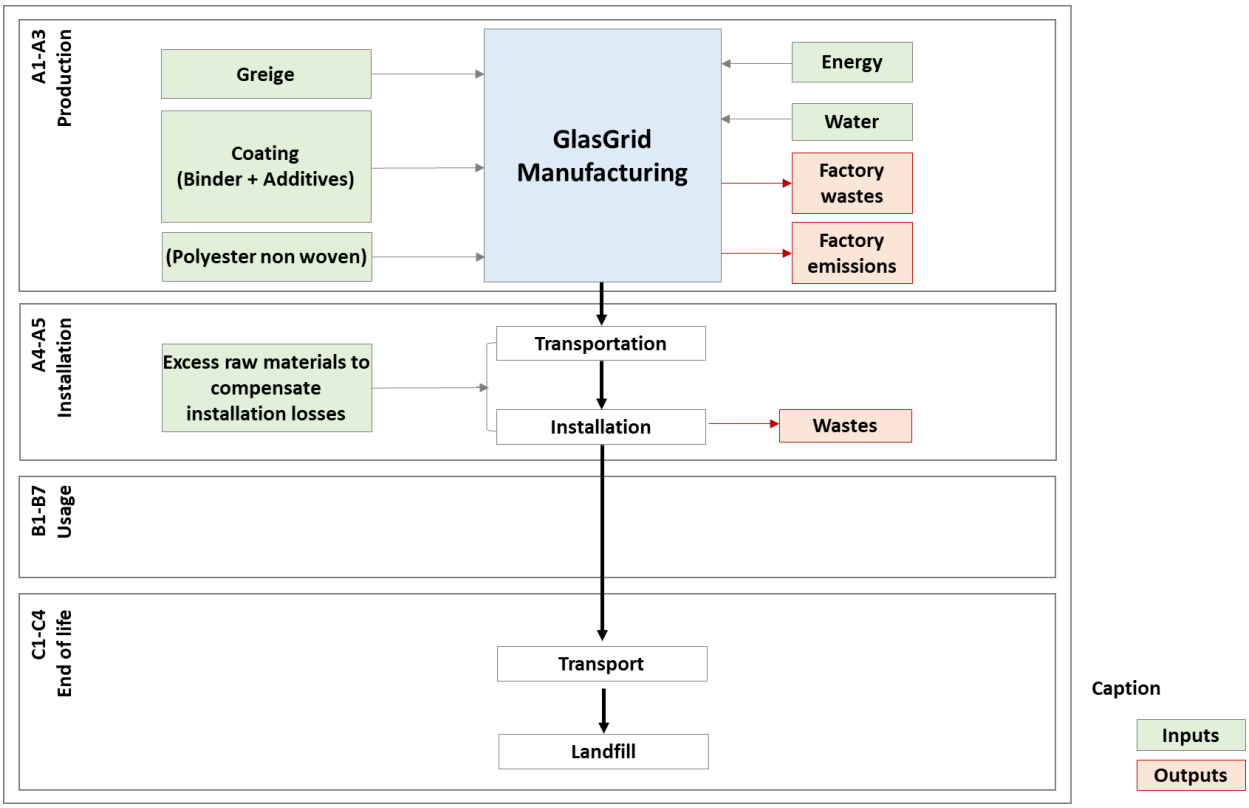
The EPD represents sales of product sold in Europe. The manufacturing site Litomyšl is based in The Czech Republic and used 100% of electricity from nuclear powerplant in 2022.

TYPE OF INFORMATION	DESCRIPTION
Location	Nuclear electricity purchased by Saint-Gobain ADFORS CZ, s.r.o
Reference year	2022
Type of data set	Cradle to gate from Sphera database Dataset: Electricity from nuclear powerplant (01/04/2024)
Source	Background data: Sphera database 2020: dataset valid until 2026
Emissions kg CO_2 eq. / kWh	0,005 kg CO2 eq. / kWh

This module also includes the emissions and wastes generated during manufacturing. Waste produce during manufacturing represents around 10% of total production in 2022.

Wastes leaving the plant are sent to landfill and are transported over 75 km.

Manufacturing process flow diagram



A4-A5, Construction process stage

Description of the stage: the construction process is divided into 2 modules: A4, transport to the customer site and A5, installation. Since there is a product loss during installation (0,5 %). The quantification of raw material compensation (A5) and its transport to the customer site (A4) are considered.

A4, Transport to the customer site: this module includes transport from the production gate to the customer site. Transport is calculated based on a scenario with the parameters described in the following table.

PARAMETER	VALUE
Fuel type and consumption of vehicle or vehicle type used for transport e.g., long distance truck, boat, etc.	Average truck trailer (27 t payload) with a real 24 t payload, diesel consumption 38 liters for 100 km Container ship, 5,000 to 200,000 dwt payload capacity
Distance	2880 km by truck and 7140 km by ship Average distance between production site and customer facilities
Capacity utilisation (including empty returns)	Use of GaBi data, default: 85% of mass capacity 30% empty returns
Bulk density of transported products	152 kg/m^3 (weight of 1m² of GlasGrid CG 50L / thickness in meter)
Volume capacity utilisation factor	Coefficient < 1

A5, Installation: this module includes:

It is recommended to install the textile using a tractor. Fuel consumption was estimated to 0,0004 L/m². A loss rate of 0,5% is assumed during installation.

PARAMETER	VALUE/DESCRIPTION
Quantity of GlasGrid CG 50L for 1 m² of product	0,222 kg/m² (greige + coating + polyester veil)
Thickness	1,46 mm
Auxiliary inputs for the installation	Tractor to install the GlasGrid with a fuel consumption estimated to 0,0004 L/m².
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	0,5%
Distance	50 km to landfill by truck
Output materials (specified by type) as results of waste processing at the building site e.g., of collection for recycling, for energy recovering, disposal (specified by route)	The GlasGrid wastes produced during installation are sent to landfill: 0,5% waste of GlasGrid CG 50L during use equivalent to 1,1 g/m² The packaging wastes are also considered to be sent to landfill: Cardboard 4,50E-03 kg/m² Pallet 7,40E-04 kg/m² Low density polyethylene film (LDPE) 4,90E-03 kg/m² Polypropylene Strip 7,00E-05 kg/m² Paper 1,43E-04 kg/m² The distance used for the landfill at the installation is 50 km

B1-B7, Use stage (excluding potential savings)

Description of the stage: the use stage is divided into the following modules:

- B1: Use
- B2: Maintenance
- B3: Repair
- B4: Replacement
- B5: Refurbishment
- B6: Operational energy use
- B7: Operational water use

Description of the scenarios and additional technical information:

As no maintenance, repair, replacement, and refurbishment are required after use of GlasGrid CG 50L by customer, no impact has been accounted for in this phase.

C1-C4, End of Life Stage

Description of the stage: this stage includes the next modules:

C1, Deconstruction, demolition

The de-construction and/or dismantling of pavement reinforcement system take part of the demolition of the entire road. In our case, the environmental impact allocated to GlasGrid is assumed to be very small and can be neglected.

C2, Transport to waste processing

The model use for the transportation (see A4, transportation to the customer site) is applied.

C3, Waste processing for reuse, recovery and/or recycling

At the end of the service life of a road, the asphalt layer, including the asphalt reinforcement, is removed. This material, known as Reclaimed Asphalt Pavement (RAP), is, after milling, considered to be reused at 100%. The GlasGrid reinforcement is milled off with the asphalt and, therefore, incorporated into the RAP. Since the asphalt reinforcement represent less than 1% by mass of the asphalt layer, the milling process is not allocated to the GlasGrid

C4, Disposal

About 20% of the asphalt reinforcement is screened off during the milling process. These 20% of GlasGrid are then sent to landfill.

End of life:

Parameter	Value/description
Collection process specified by type	The entire product is collected alongside the asphalt layer and send to Reclaimed Asphalt Pavement facilities for milling. 0,222 kg of GlasGrid CG 50L (collected with asphalt layer).
Recovery system specified by type	The product is milled of with the asphalt layer and incorporated into the RAP. There are no possibilities of recovering, recycling or reusing the GlasGrid.
Disposal specified by type	The product is milled of with the asphalt layer and incorporated into the RAP. 0,044 kg of GlasGrid CG 50L are landfilled
Assumptions for scenario development (e.g. transportation)	20% of the product will go to landfill. The waste going to landfill will be transported by truck with 27 t payload, using diesel as a fuel consuming 38 liters per 100km Assumption for distance covered is 50 km.

D, Reuse/recovery/recycling potential

100% of wastes (product and packaging) are considered to be landfilled. There is no reuse, nor recovery, nor recycling of this product. Hence, no recycling benefits are reported on stage D.

LCA results

As specified in EN 15804:2012+A2:2019/AC:2021 and the PCR 2019:14 Construction Products, version 1.3.4, the environmental impacts are declared and reported using the baseline characterization factors from the ILCD. Raw materials and energy consumption, as well as transport distances have been taken directly from the manufacturing plant (Production data according 2022). Characterisation factors EN15804 based on EF 3.1.

According to the EN 15804:2012+A2:2019/AC:2021 standard, the LCIA results are relative expressions translating impacts into environmental indicators (midpoint impact categories). Thus, the estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

All the results refer to a GlasGrid CG 50L with a weight of 0,222 kg/m^2.

As stated in the PCR 1.3.4, module C being included in this EPD, it is advised to consider module C when comparing results from modules A1-A3.

Environmental Impacts

Environmental indicators		Product stage	Construction stage		Use stage							End of life stage				Reuse, Recovery Recycling
		A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Climate Change [kg CO_2 eq.]	**7,51E-01**	**7,18E-02**	**1,48E-02**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,03E-03**	**0**	**1,40E-03**	**0**
	Climate Change (fossil) [kg CO2 eq.]	**7,59E-01**	**7,10E-02**	**6,00E-03**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,00E-03**	**0**	**1,40E-03**	**0**
	Climate Change (biogenic) [kg CO_2 eq.]	**-8,76E-03**	**0**	**8,76E-03**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Climate Change (land use change) [kg CO_2 eq.]	**3,39E-04**	**8,31E-04**	**3,72E-06**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,77E-05**	**0**	**4,83E-06**	**0**
	Ozone depletion [kg CFC-11 eq.]	**4,05E-07**	**6,64E-15**	**2,08E-09**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,66E-16**	**0**	**4,33E-15**	**0**
	Acidification [Mole of H+ eq.]	**2,15E-03**	**7,82E-04**	**2,60E-05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,91E-06**	**0**	**7,85E-06**	**0**
	Eutrophication aquatic freshwater [kg P eq.]	**7,75E-05**	**2,17E-07**	**5,08E-07**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7,04E-09**	**0**	**7,53E-07**	**0**
	Eutrophication aquatic marine [kg N eq.]	**5,42E-04**	**1,91E-04**	**2,60E-05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,65E-07**	**0**	**1,69E-06**	**0**
	Eutrophication terrestrial [Mole of N eq.]	**5,72E-03**	**2,00E-03**	**1,07E-04**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7,85E-06**	**0**	**1,86E-05**	**0**
	Photochemical ozone formation [kg NMVOC eq.]	**2,21E-03**	**5,43E-04**	**3,36E-05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,83E-06**	**0**	**5,41E-06**	**0**
	Depletion of abiotic resources - mineral and metals [kg Sb eq.][1]	**2,17E-06**	**4,68E-09**	**1,30E-08**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,40E-10**	**0**	**8,72E-11**	**0**
	Depletion of abiotic resources – fossil fuels [MJ][1]	**1,67E+01**	**9,00E-01**	**1,09E-01**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,20E-02**	**0**	**2,22E-02**	**0**
	Water use [m³ world equiv.][1]	**2,09E-01**	**7,76E-04**	**1,00E-03**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,46E-05**	**0**	**1,69E-04**	**0**

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Resources Use

	Resources Use indicators	Product stage	Construction stage		Use stage							End of life stage				D Reuse, recovery, recycling
		A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE) [MJ]	4,27E-01	5,60E-02	3,00E-03	0	0	0	0	0	0	0	0	2,00E-03	0	3,40E-03	0
	Use of renewable primary energy resources used as raw materials (PERM) [MJ]	1,44E-01	0	7,20E-04	0	0	0	0	0	0	0	0	0	0	0	0
	Total use of renewable primary energy resources (PERT) [MJ]	5,71E-01	5,60E-02	3,72E-03	0	0	0	0	0	0	0	0	2,00E-03	0	3,40E-03	0
	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE) [MJ]	1,48E+01	9,00E-01	9,90E-02	0	0	0	0	0	0	0	0	2,20E-02	0	2,22E-02	0
	Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	1,96E+00	0	1,00E-02	0	0	0	0	0	0	0	0	0	0	0	0
	Total use of non-renewable primary energy resources (PENRT) [MJ]	1,67E+01	9,00E-01	1,09E-01	0	0	0	0	0	0	0	0	2,20E-02	0	2,22E-02	0
	Use of secondary material (SM) [kg]	9,71E-03	0	2,67E-05	0	0	0	0	0	0	0	0	0	0	0	0
	Use of renewable secondary fuels (RSF) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Use of non-renewable secondary fuels (NRSF) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net use of fresh water (FW) [m3]	5,39E-03	6,28E-05	2,98E-05	0	0	0	0	0	0	0	0	2,04E-06	0	5,07E-06	0

Waste Category & Output flows

	Waste Category & Output Flows	Product stage	Construction stage		Use stage							End of life stage				D Reuse, recovery, recycling
		A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Hazardous waste disposed (HWD) [kg]	**9,48E-03**	**2,88E-11**	**7,33E-05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,97E-13**	**0**	**5,48E-12**	**0**
	Non-hazardous waste disposed (NHWD) [kg]	**2,23E-01**	**1,25E-04**	**1,30E-02**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,35E-06**	**0**	**4,44E-02**	**0**
	Radioactive waste disposed (RWD) [kg]	**1,08E-03**	**1,13E-06**	**5,42E-06**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,78E-08**	**0**	**3,13E-07**	**0**
	Components for re-use (CRU) [kg]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Materials for Recycling (MFR) [kg]	**3,18E-04**	**0**	**3,42E-05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Materials for Energy Recovery (MER) [kg]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Exported energy (EE) [MJ]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Additional mandatory indicators from EN 15804

	Product stage	Construction stage		Use stage							End of life stage				Reuse, Recovery Recycling
Environmental indicators	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Climate Change [kg CO_2 eq.][2]	**7,80E-01**	**7,20E-02**	**7,00E-03**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,00E-03**	**0**	**1,40E-03**	**0**

Information on biogenic carbon content

	Biogenic Carbon Content	Product stage A1 / A2 / A3
	Biogenic carbon content in product [kg]	**0**
	Biogenic carbon content in packaging [kg]	**2,39E-03**

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

There is no biogenic carbon content in the product. The biogenic carbon content for packaging is quantified for the cardboard, the pallet, and the paper label.

[2] The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Environmental impacts according to EN 15804:2012 + A1

The following tables presents the results for GlasGrid CG 50L according to EN 15804 +A1.

		Product stage	Construction stage		Use stage							End of life stage				Reuse, recovery, recycling
		A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Environmental impacts	Global Warming Potential (GWP) [kg CO_2eq.]	7,63E-01	7,00E-02	7,00E-03	0	0	0	0	0	0	0	0	2,00E-03	0	6,00E-03	0
	Ozone depletion (ODP) [kg CFC 11eq.]	2,79E-07	1,05E-18	1,44E-09	0	0	0	0	0	0	0	0	3,14E-20	0	3,39E-19	0
	Acidification potential (AP) [kg SO_2eq.]	1,11E-03	6,28E-04	2,02E-05	0	0	0	0	0	0	0	0	1,39E-06	0	3,29E-05	0
	Eutrophication potential (EP) [kg $(PO_4)_3$-eq.]	3,04E-03	6,76E-05	2,80E-05	0	0	0	0	0	0	0	0	3,40E-07	0	4,43E-05	0
	Photochemical ozone creation (POCP) - [kg Ethylene eq.]	2,14E-04	3,91E-05	2,71E-06	0	0	0	0	0	0	0	0	2,29E-07	0	2,92E-06	0
	Abiotic depletion potential for non-fossil resources (ADP-elements) [kg Sb eq.]	1,97E-05	5,28E-09	1,01E-07	0	0	0	0	0	0	0	0	1,59E-10	0	2,03E-09	0
	Abiotic depletion potential for fossil resources (ADP-fossil fuels) [MJ]	1,33E+01	8,97E-01	9,10E-02	0	0	0	0	0	0	0	0	2,10E-02	0	1,06E-01	0

Appendix:

Data quality

Inventory data quality is judged by geographical, temporal, and technological representativeness. To cover these requirements and to ensure reliable results, first-hand industry data crossed with LCA background datasets were used. The data was collected from internal records and reporting documents from Saint-Gobain ADFORS CZ, s.r.o. After evaluating the inventory, according to the defined ranking in the LCA report, the assessment reflects fair inventory data quality for the geographical representation, fair for technological and good for temporal representation.

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