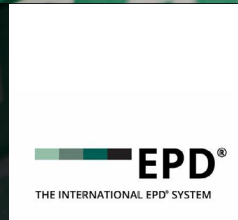




# Environmental Product Declaration for GIB® Plasterboard



ENVIRONMENTAL PRODUCT DECLARATION

Programme:	The International EPD® System <a href="http://www.environdec.com">www.environdec.com</a> The Australasian EPD® Programme Ltd <a href="http://www.epd-australasia.com">www.epd-australasia.com</a>
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PRODUCED UNDER THE AUSTRALASIAN EPD PROGRAMME IN ACCORDANCE WITH ISO 14025:2006 AND EN 15804:2012+A2:2019

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Winstone Wallboards Ltd is New Zealand's largest manufacturer and marketer of gypsum plasterboard, drywall systems, associated products and services. The company has been operating since 1927 and manufactures plasterboard systems under the GIB® brand name. Winstone Wallboards Ltd, has facilities in Auckland, Wellington and Christchurch.





The GIB® brand is a New Zealand icon brand and Winstone Wallboards has a proud heritage of being a New Zealand focused and New Zealand based company. Locally made for local conditions, the products meet or exceed the New Zealand building code, are BRANZ appraised and are backed by full technical information and support to give complete confidence in using GIB® Plasterboard Systems.

The Winstone Wallboards warranty covers GIB® products and/or systems for a minimum of 10 years from the date of purchase. Winstone Wallboards warrants that GIB® products will be free from defects caused by factory workmanship or materials and, subject to compliance with the conditions attached, that the product or system will perform to the extent set out in relevant Winstone Wallboards published literature current at the time of installation.

## General information

An Environmental Product Declaration, or EPD, is a standardised and verified way of quantifying the environmental impacts of a product based on a consistent set of rules known as a PCR (Product Category Rules). Environmental product declarations

within the same product category from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

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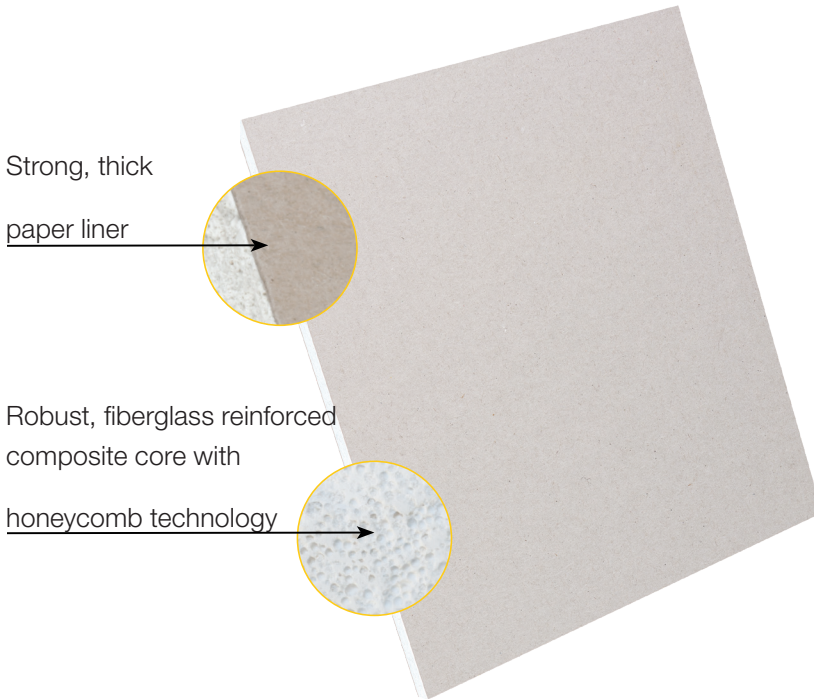
# GIB® Plasterboard product variety

Information of technical and functional characteristics of the boards are presented below. This information was retrieved from the GIB® website at <https://www.gib.co.nz/products/plasterboards/>. For each board, a chart with sheet thickness, width, length, and density is presented.

## GIB STANDARD®

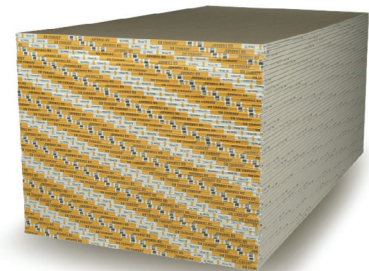
GIB Standard® plasterboard is an economical lining material available in 10mm and 13mm thicknesses. It is suitable for multiple uses: maintains bracing performance of GS1 and GS2 systems and ceiling diaphragms as presented in GIB EzyBrace® Systems 2011; and can be used in GIB® Fire Rated and GIB® Noise Control Systems. While 10mm GIB Standard®

plasterboard is suitable for walls, the thicker 13mm GIB Standard® plasterboard is recommended for use on ceilings for a better quality finish, especially where wet and humid conditions mean ceiling sag can be amplified. Used in ceilings it can withstand distributed loads up to 3.0kg/m<sup>2</sup> easily supporting loads such as R7.0 insulation.



- Clean score and snap means cleaner cuts and better edges.
- Low edge breakout and damage means less wastage.
- Easy screw bedding means quicker installation.
- Excellent uniformity means a consistent, quality finish.
- Great flexibility means easy sheet manoeuvrability with less risk of damage and wastage.
- Strong and rigid with low sag for easy sheet lifting and flat ceilings.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	10	1 200									7.0
TE/TE	13	1 200									8.7
TE/TE	10	1 200									7.0

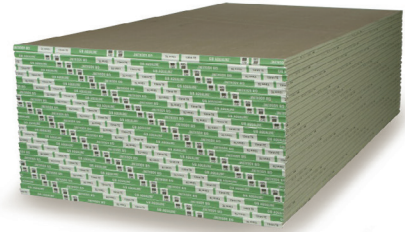


### GIB AQUALINE® (WIDELINE)

GIB Aqualine® is a lining for wet areas with a fibreglass core that provides moisture resistance and the strength to support the weight of tiles. 10 mm GIB Aqualine® can be used for ceramic tiles up to 20 kg/m<sup>2</sup>

and 13 mm GIB Aqualine® can be used for ceramic tiles up to 40 kg/m<sup>2</sup>. This board is also presented as Wideline (1 350 mm) for fewer joints and better finish.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	10	1 200									7.8
TE/TE	13	1 200									10.2
TE/SE	10	1 200									7.8
TE/SE	10	1 350									7.8

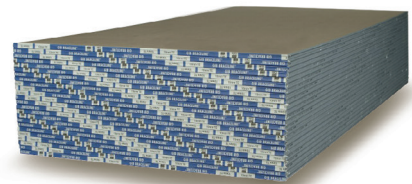


### GIB BRACELINE® (WIDELINE)

GIB Braceline® is an effective wall bracing sheet for light timber framed buildings. It is a high performance plasterboard designed specifically for reducing the level of sound transmission between rooms and even between floors in two storey homes due to its high

density core. Other benefits of this product are its 30 and 60 minute fire ratings when used in fire systems and its increased strength and stiffness gives a more solid wall or ceiling. This board is also presented as Wideline (1 350 mm) for fewer joints and better finish.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	10	1 200									9.0
TE/TE	13	1 200									12.4
TE/SE	10	1 200									9.0
TE/SE	10	1 350									9.0



### GIB FYRELINE®

GIB Fyreline® is a high performance fire resistant board with pink face paper. Its high density, modified core resists exposure to fire longer than standard

plasterboard. GIB Fyreline® systems provide from 1/2 hour to 4 hours fire protection on standard 600mm timber or steel frames.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	10	1 200									7.0
TE/TE	13	1 200									10.7
TE/TE	16	1 200									13.7
TE/TE	19	1 200									16.5

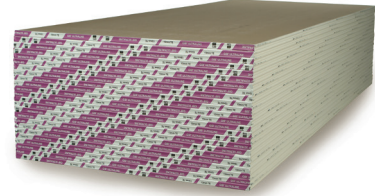


### GIB ULTRALINE®

GIB Ultraline® has a special coated white surface paper (pearlcoat) presenting a finer, smoother texture, and a special mix of plaster and fibreglass reinforcing in its core. These features make it more solid and rigid than 10 mm GIB Standard® plasterboard and result in

an enhanced finish quality. GIB Ultraline® is suitable for areas of a home which are seen most often by visitors and those living in house including entranceways, lounges, and dining rooms.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	10	1 200									7.2
TE/TE	13	1 200									9.1



### GIB WEATHERLINE®

GIB Weatherline® is a cost-effective, high-performance rigid air-barrier board. Used as a component in GIB Weatherline® Rigid Air Barrier Systems, GIB Weatherline® sheets feature a water and mould resistant fibreglass reinforced gypsum core and a

water resistant glass fibre sheet facing for excellent water, mould and fire performance. GIB Weatherline® Systems are suitable for use in both residential and commercial buildings and have been tested for wind speeds up to and including Extra High wind zone.

	Board Thickness (mm)	Sheet Width (mm)	400	2450	2 700	2750	3 000	3 300	3 600	4 200	Max. kg/m <sup>2</sup>
TE/TE	10	1 200									9.0
TE/TE	13	1 200									11.5

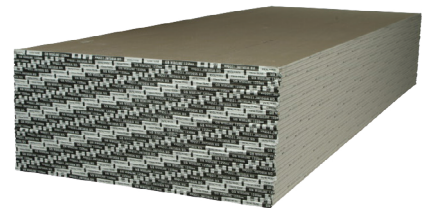


### GIB WIDELINE®

GIB Wideline® plasterboard is the ideal product for horizontal fixing on 2.7m studs.

At 1 350mm wide, this means fewer joints and a better finish.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
GIB Wideline® TE/SE	10	1 350									7.0
GIB Wideline® TE/SE	13	1 350									8.7



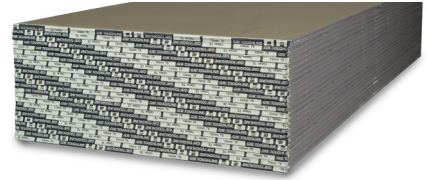


### GIB TOUGHLINE®

GIB Toughline® is a high performance plasterboard designed specifically for use in areas requiring improved impact resistance. GIB Toughline® is a 13 mm thick high-density plasterboard. A continuous fiberglass mesh is embedded inside the back face

of the board. This gives the board increased impact resistance and reduces repair costs. GIB Toughline® is ideal for high traffic areas such as hallways, classrooms, patient rooms, and offices.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	13	1 200									11.4



### GIB X-BLOCK®

GIB X-Block® is a specialist plasterboard and jointing system to provide protection from X-ray radiation in medical facilities, dental clinics and veterinary

practices. Unlike other lining systems traditionally used in such applications, GIB-X Block® achieves an effective radiation barrier without the use of lead.

	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	13	1 200									18.3

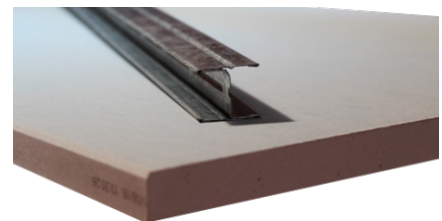


### GIB BARRIERLINE®

Gib Barrierline® is a product for intertenancy walls. It is a cost-effective, lightweight, robust board with high noise control and fire-resistant performance.

GIB Barrierline® plasterboard has a water and mould resistant core.

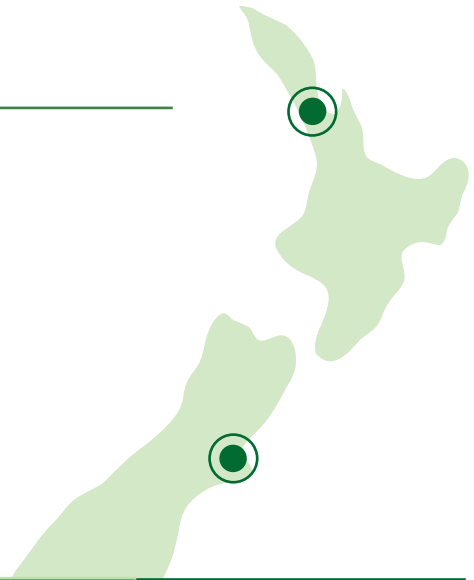
	Board Thickness (mm)	Sheet Width (mm)	2 400	2 700	3 000	3 300	3 600	4 200	4 800	6 000	Max. kg/m <sup>2</sup>
TE/TE	25	600									20.2



## PLASTERBOARD PRODUCTION

The production of the plasterboards takes place in Auckland and Christchurch.

This EPD presents averaging of the results of the two sites for each product group.



**Table 1: Plasterboard products included in the EPD**

Product	Board weight [kg/m <sup>2</sup> ]	Group	Sites
10 mm GIB Standard <sup>®</sup>	7.0	1	AKL, CHC
10 mm GIB Aqualine <sup>®</sup>	8.0	2	AKL, CHC
10 mm GIB Aqualine <sup>®</sup> Wideline	8.0	2	AKL
10 mm GIB Braceline <sup>®</sup>	9.3	3	AKL, CHC
10mm GIB Braceline <sup>®</sup> Wideline	9.3	3	AKL, CHC
10 mm GIB Fyreline <sup>®</sup>	7.0	4	AKL, CHC
10 mm GIB Ultraline <sup>®</sup>	7.5	5	AKL, CHC
10 mm GIB Weatherline <sup>®</sup>	9.0	6	CHC
10 mm GIB Wideline <sup>®</sup>	7.0	7	AKL, CHC
13 mm GIB Aqualine <sup>®</sup>	11.0	8	AKL, CHC
13 mm GIB Braceline <sup>®</sup>	12.5	9	AKL, CHC
13mm GIB Fyreline <sup>®</sup>	11.0	10	AKL, CHC
13 mm GIB Standard <sup>®</sup>	9.0	11	AKL, CHC
13 mm GIB Toughline <sup>®</sup>	11.4	12	CHC
13 mm GIB Ultraline <sup>®</sup>	9.1	13	AKL, CHC
13 mm GIB Weatherline <sup>®</sup>	11.5	14	CHC
13 mm GIB Wideline <sup>®</sup>	8.7	15	AKL, CHC
13 mm GIB X-Block <sup>®</sup>	18.3	16	CHC
16 mm GIB Fyreline <sup>®</sup>	15.3	17	AKL, CHC
19 mm GIB Fyreline <sup>®</sup>	16.9	18	AKL, CHC
25 mm GIB Barrierline <sup>®</sup>	20.2	19	CHC

\*AKL = Auckland, CHC = Christchurch.

This grouping reflects the different types of Winstone plasterboard products available in the New Zealand market.

## CONTENT DECLARATION

According to the General Programme Instructions, the EPD shall include a content declaration with a list of materials and chemical substances including

information on their hazardous properties. The percentage composition of Winstone plasterboards is given below in Table 2.

**Table 2: Content declaration**

Product	Plaster [%]	Paper [%]	Gypsum [%]	Starch [%]	Vermiculite [%]	Barium Sulphate [%]	Other materials [%]
GIB Standard® 10 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Aqualine® 10 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Braceline® 10 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Fyrelime® 10 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Ultraline® 10 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Weatherline® 10 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Wideline® 10 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Aqualine® 13 mm	>90%	<6%	<2%	<1%	<6%	0%	<2%
GIB Braceline® 13 mm	>90%	<6%	<2%	<1%	<6%	0%	<2%
GIB Fyrelime® 13 mm	>90%	<6%	<2%	<1%	<6%	0%	<2%
GIB Standard® 13 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Toughline® 13 mm	>90%	<6%	<2%	<1%	<6%	0%	<2%
GIB Ultraline® 13 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Weatherline® 13 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB Wideline® 13 mm	>90%	<6%	<2%	<1%	0%	0%	<2%
GIB X-Block® 13 mm	>40%	<6%	<2%	<1%	0%	<50%	<2%
GIB Fyrelime® 16 mm	>90%	<6%	<2%	<1%	<6%	0%	<2%
GIB Fyrelime® 19 mm	>90%	<6%	<2%	<1%	<6%	0%	<2%
GIB Barrierline® 25 mm	>90%	<6%	<2%	<1%	<6%	0%	<2%
Post-consumer material, weight-%	0%	100%	0%	0%	0%	0%	0%
Renewable material, weight-%	0%	100%	0%	100%	0%	0%	0%

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## PRODUCT INFORMATION

This EPD covers the different plasterboard products listed in Table 1. No differentiation is made between different edge finishes (TE/TE, both tapered; TE/SE, 1 tapered, 1 square edge) as production processes are similar.

Table 1 lists the calculated average board weight for the 2020/21 financial year. This calculated value may differ slightly from GIB® specifications. It also lists components included in the product.

None of the products in this EPD contain any materials included on the Candidate List of substances of very high concern under the European REACH Regulation (EC 1907 / 2006) at a concentration greater than 0.1% weight/weight. All plasterboard products comply with the standard “AS/NZS 2588 Gypsum Plasterboard” and from a quality management perspective with ISO 9001.

### Declared Unit:

## 1 m<sup>2</sup> of installed plasterboard

according to PCR 2019:14 Construction products v1.11, published 2021-02-05 (EPD International, 2021). The reference flow used to present the results is the same as the declared unit.

### Industry classification

All covered plasterboard types can be classified as can be seen in the following table:

---

**Table 3: Classification of plasterboard**

Classification	Code	Subclass	Category
Plasterboard	UN CPC Ver.2.1	37530	Articles of plaster or of compositions based on plaster

---

## SYSTEM BOUNDARY

This EPD is cradle-to-gate type with optional modules (A4, A5) + modules C1–C4, and module D', as shown in Table 4. The options include transport to the customer (module A4) and installation (module

A5). Other life cycle stages (modules B1–B7) are dependent on particular scenarios and best modelled at the building level. The full life cycle of GIB plasterboard is presented in Figure 1.

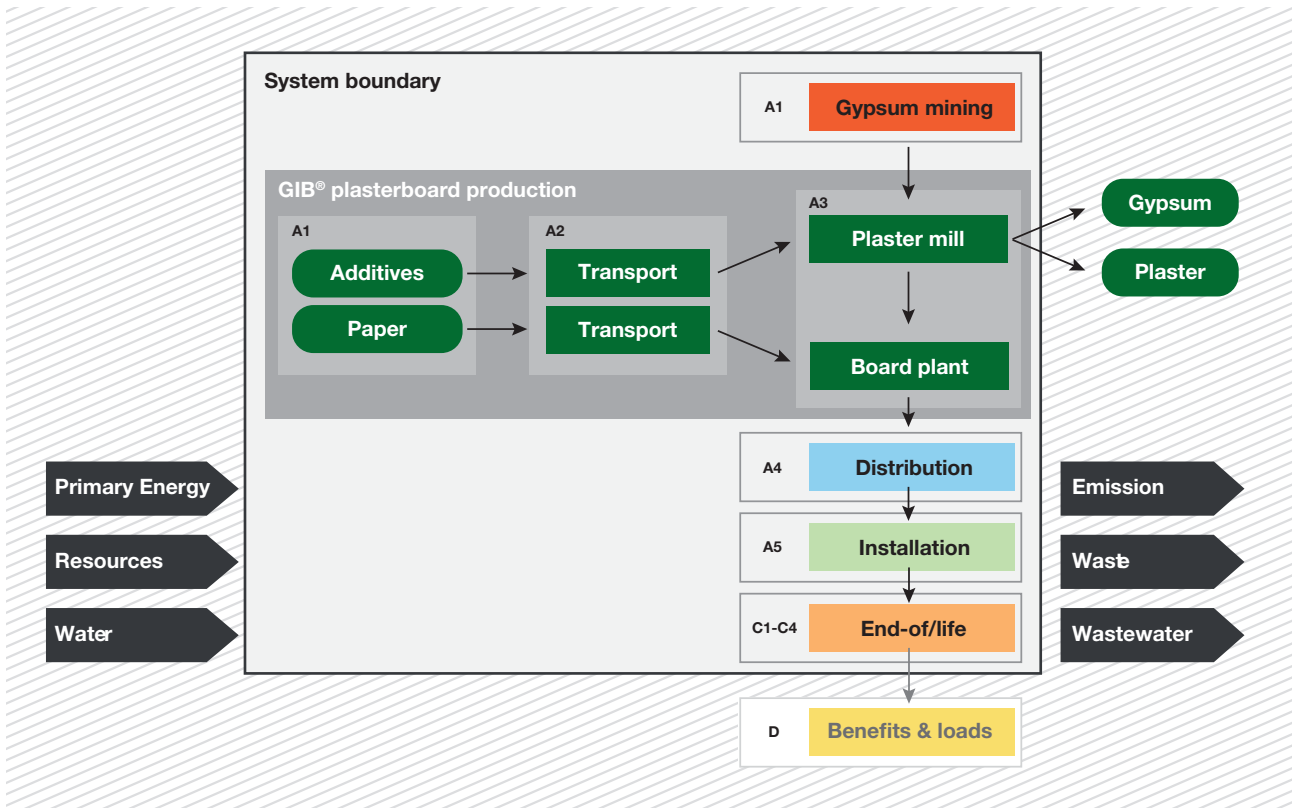
**Table 4: Modules included in the scope of the EPD**

(X = included in the EPD; ND = module not declared (such a declaration shall not be regarded as an indicator result of zero))

	Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundary
	Raw material supply	Transport of raw materials	Manufacturing	Transport to customer	Construction / Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction / demolition	Transport to waste processing	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
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	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO	NZ	NZ	NZ	NZ								NZ	NZ	NZ	NZ	NZ
Specific data	>90%																
Variation products	<10%																
Variation sites	<10.1%*																

\*Variation between sites is up to rounding 10%, as required by the PCR

Figure 1: Life cycle stages of GIB® plasterboard



## PRODUCTION STAGE

Plasterboard is manufactured by heating gypsum in a plaster mill (known as calcination) to remove moisture and produce Plaster of Paris. The dry plaster powder is then mixed with water and additives to give each board its desired properties. The mixture is rolled out

to a uniform thickness and paper is added to the top and bottom faces. The board is then dried, converting the plaster back to gypsum, and cut to size ready for distribution to the customer.

### Module A1 (raw material supply)

includes the mining of gypsum in Australia, production of paper in Australia, production of additives, generation and transmission of electricity in New Zealand, and

generation of thermal energy from natural gas and LPG. Raw materials are delivered in bulk, so packaging is unnecessary.

### Module A2 (transportation)

Includes transport of gypsum via rail to port and shipping in a bulk carrier to Auckland (for the Auckland production site) and Lyttleton (for the

Christchurch production site). Transport from port to production plant is via truck. Transport for paper and all other additives is a mixture of truck and sea freight.

### Module A3 (manufacturing)

includes production of ancillary materials and the composting, recycling and landfill of manufacturing waste.

The life cycle stages considered in this document result in the flow chart for GIB plasterboard shown in Figure 1.

---

## CONSTRUCTION STAGE

### Module A4 (distribution)

includes distribution from Winstone manufacturing sites in Auckland and Christchurch through its distribution centres. An average distribution model

is applied, which includes both distribution through builder's merchants and direct delivery by Winstone to construction sites in major urban centres.

### Module A2 A5 (installation)

includes the materials for installation of the plasterboard (plaster, jointing tape, screws, and water)

and the production and disposal of installation offcuts to landfill.

---

## END-OF-LIFE STAGE

### Module C1 (Deconstruction / demolition)

includes demolition of the whole building including plasterboards, using a construction excavator.

### Module C3 (waste processing)

includes the processing of plasterboard waste for reuse or recycling. As all plasterboard is assumed to go to landfill, this module should not present any impact.

### Module C2 (transport to end-of-life)

includes transport of waste plasterboard to landfill after demolition of the building where it was used.

### Module C4 (disposal)

includes plasterboard end-of-life in landfill.

---

## BENEFITS & LOADS BEYOND THE SYSTEM BOUNDARY

### Module D (reuse-recovery-recycling-potential)

includes materials that could be fed into a second life cycle. As we considered that all plasterboard is sent

to landfill after deconstruction, this module does not present any benefit/burden.

## LIFE CYCLE INVENTORY (LCI) DATA

The Life Cycle Inventory data used in this EPD has been collected and applied according to EN 15804:2012+A2:2019, ISO 14025 and PCR 2019:14 Construction Products and Construction Services v1.11 (2021-02-05) of the International EPD® System

Primary data were used for all manufacturing operations up to the factory gate, including plaster mill and plasterboard plant. Most of the data represent the financial year 2020/21 (1 July 2020 to 30 June 2021). This is the most recent data for a full financial year of production, so this data is “as current as possible” as required by EN 15804 and the PCR.”

The LCA for Experts software system for life cycle engineering developed by Sphera has been used (Sphera 2021). All relevant background datasets are taken from Sphera Databases 2021 and documented online (at <https://sphera.com/product-sustainability-gabi-data-search/>).

Most datasets have a reference year between 2018 and 2021 and all fall within the 10-year limit allowable for generic data under EN 15804.

## KEY ASSUMPTIONS

### Background data (modules A1-A3)

The following background data was used for relevant electricity grid mixes, thermal energy:

- NZ: Electricity grid mix, Sphera, reference year 2018
- AU: Electricity grid mix, Sphera, reference year 2018 (for operations in Australia e.g. gypsum mining)
- NZ: Thermal energy from natural gas, Sphera, reference year 2018
- EU-27: Thermal energy from LPG, Sphera, reference year 2018 (no NZ-specific dataset was available)

No significant assumptions were made in modules A1-A3 that would limit the interpretation of the results presented in this EPD. Modules A4 onward are based on scenarios and actual environmental impacts may differ depending on the specific site where plasterboard is sold and used. Nonetheless, the scenarios presented are currently in use and representative for the most likely installation (A4-A5) and end of life (C1-C4).

### Installation (module A5)

During installation, 15% of the plasterboard is assumed to be lost as offcuts. 25% of these offcuts are sent to industrial composting and 75% to landfill. The transport distance to landfill and composting is assumed to be 50 km with capacity utilisation of 50%. The consumables shown in Table 5 are assumed based on GIB® installation guidelines.

**Table 5: Amount of installation materials per m<sup>2</sup> of plasterboard**

Input per m <sup>2</sup> of plasterboard	Amount	Unit
Jointing compound (GIB tradeset)	0.125	kg
Jointing compound (GIB Trade Finish Extra Lite)	0.300	kg
Jointing tape	0.009375	kg
Screws (8 screws, 2.6 g each)	0.0208	kg
Water	0.0825	L



## KEY ASSUMPTIONS CONTD.

### End of life (module C2 and C4)

100% of plasterboard waste and the waste from installation materials is assumed to be sent to landfill (i.e. worst case). Plasterboard is assumed to be disposed of in a municipal landfill rather than an inert demolition

waste landfill as plasterboard is not required to be separated from other waste in New Zealand. The assumed transport distance is 50 km with capacity utilisation of 50%.

### Cut-off criteria

All necessary data for a complete LCI has been collected, subject to the cut-off rules as per EN15804 and PCR 2019:14. Inputs knowingly excluded from the inventory are packaging materials for minor inputs

such as additives, lubricants, greases, etc., which are used in very small quantities. These exclusions are not expected to have a significant impact.

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## ALLOCATION

**Upstream data:** For refinery products, allocation is done by mass and net calorific value. Inventories for electricity and thermal energy generation include allocation by economic value for some by-products (e.g. gypsum, boiler ash and fly

ash). Allocation by energy is applied for co-generation of heat and power. For materials and chemicals, the allocation rule most suitable for the product is applied (Sphera online documentation at <https://sphera.com/product-sustainability-gabi-data-search/>).

**Manufacturing:** The share of inputs used per product were based on bills of materials. Allocation of all inputs in the plasterboard plant was done on a mass basis,

except for electricity which was done on an area basis (i.e. per square metre of board).

**Material recycling (cut-off approach):** Any open scrap inputs into manufacturing remain unconnected. The system boundary at end of life is drawn after scrap collection to account for the collection rate,

which generates an open scrap output for the product system. The processing and recycling of the scrap is associated with the subsequent product system and is not considered in this study.

**Energy recovery from landfill (cut-off approach):** The system boundary includes the waste incineration and landfilling processes following the polluter-pays-principle. In cases where materials are sent to landfills,

they are linked to an inventory that accounts for waste composition, regional leakage rates, landfill gas capture as well as utilisation rates (flaring vs. power production). No credits for power or heat production are given.

## AVERAGING RESULTS

The results of similar line products and thickness were grouped (averaged) considering the two production sites (Auckland and Christchurch). Grouping was based on the LCIA indicator IPCC AR5 GWP-GHG as required by PCR 2019:14, section 2.6.1. The variation for all products is within round 10% threshold. For some

products, however, if rounding is extended to one digit, the variation is up to 10.1%. We chose to group products as a buyer of GIB plasterboard cannot choose which factory it comes from. The variation per product is presented in table 6.

**Table 6: Grouping of products between sites showing results for the indicator GWP-GHG for modules A1-A3, average, min and max variation**

Groups	Products	Average GHG result (kg CO <sub>2</sub> -eq)	Minimum variation	Maximum variation
1	10 mm GIB Standard	1.85	-9.95%	9.95%
2	10 mm GIB Aqualine	2.14	-9.59%	9.59%
3	10 mm GIB Braceline	2.40	-10.0%	10.0%
4	10 mm GIB Fyreline	1.96	-10.0%	10.0%
5	10 mm GIB Ultraline	1.96	-10.1%	10.1%
6	10 mm GIB Weatherline	2.76	-	-
7	10 mm GIB Wideline	1.84	-10.0%	10.0%
8	13 mm GIB Aqualine	3.08	-8.70%	8.70%
9	13 mm GIB Braceline	3.38	-9.17%	9.17%
10	13 mm GIB Fyreline	3.02	-8.99%	8.99%
11	13 mm GIB Standard	2.33	-10.0%	10.0%
12	13 mm GIB Toughline	3.53	-	-
13	13 mm GIB Ultraline	2.46	-9.76%	9.76%
14	13 mm GIB Weatherline	3.43	-	-
15	13 mm GIB Wideline	2.33	-9.98%	9.98%
16	13 mm GIB X-Block	10.76	-	-
17	16 mm GIB Fyreline	4.19	-8.90%	8.90%
18	19 mm GIB Fyreline	4.79	-8.45%	8.45%
19	25 mm GIB Barrierline	6.47	-	-

## ENVIRONMENTAL IMPACT INDICATORS

An introduction to each environmental indicator is provided below. The best-known effect of each indicator is listed under its name. The result of each indicator is presented per m<sup>2</sup> of installed plasterboard.

**Note:** All indicators represent the potential to cause environmental impacts; they do not predict if specific environmental thresholds, safety margins or risks will be exceeded. The actual impacts on the environment typically depend upon local, regional and/or global conditions.



### GLOBAL WARMING POTENTIAL (GWP) A.K.A. CARBON FOOTPRINT CLIMATE CHANGE

A measure of greenhouse gas emissions, such as carbon dioxide and methane. These emissions increase absorption of radiation emitted by the earth, intensifying the natural greenhouse effect. Contributions to GWP can come from either fossil or biogenic sources, e.g. burning fossil fuels or burning wood. GWP is reported as a total as well as being separated into biogenic carbon (GWPB) and fossil carbon (GWPF).



### OZONE DEPLETION POTENTIAL (ODP) OZONE HOLE

A measure of air emissions that contribute to the depletion of the stratospheric ozone layer, causing higher levels of ultraviolet B (UVB) to reach the earth's surface with detrimental effects on humans, animals and plants.



### ACIDIFICATION POTENTIAL (AP) ACID RAIN

A measure of emissions that cause acidifying effects to the environment. Acidification potential is a measure of a molecule's capacity to increase the hydrogen ion (H<sup>+</sup>) concentration in the presence of water, thus decreasing the pH value. Potential effects include fish mortality, forest decline and the deterioration of building materials.



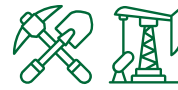
### EUTROPHICATION POTENTIAL (EP) ALGAL BLOOMS

A measure of nutrient enrichment that may cause an undesirable shift in species composition and elevated biomass production in both aquatic and terrestrial ecosystems. It includes potential impacts of excessively high levels of macronutrients, the most important of which are nitrogen (N) and phosphorus (P).



### PHOTOCHEMICAL OZONE FORMATION POTENTIAL (POCP) SUMMER SMOG

A measure of emissions of precursors that contribute to ground level smog formation (mainly ozone O<sub>3</sub>), produced by the reaction of volatile organic compounds (VOCs) and carbon monoxide in the presence of nitrogen oxides under the influence of UV light. Ground level ozone may be harmful to human and ecosystem health and may also damage crops.



### ABIOTIC DEPLETION POTENTIAL (ADPMM AND ADPF) RESOURCE CONSUMPTION

The consumption of non-renewable resources leads to a decrease in the future availability of the functions supplied by these resources. Depletion of mineral resource elements (ADPmm) and non-renewable fossil energy resources (ADPf) are reported separately.



### WATER DEPLETION POTENTIAL WATER CONSUMPTION

The potential for water deprivation, to either humans or ecosystems.

## GROUP 1: 1M<sup>2</sup> OF GIB® STANDARD 10MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.20E+00	2.10E-01	7.06E-01	4.16E-03	3.10E-02	0.00E+00	2.11E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	1.87E+00	2.01E-01	5.33E-01	4.16E-03	2.97E-02	0.00E+00	5.54E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.69E-01	8.79E-03	1.73E-01	4.12E-07	1.32E-03	0.00E+00	1.56E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.36E-04	2.51E-06	1.91E-04	3.02E-08	2.25E-07	0.00E+00	1.11E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.32E-12	2.34E-14	1.48E-12	3.30E-16	2.46E-15	0.00E+00	8.29E-13	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	8.56E-03	1.05E-03	2.52E-03	1.98E-05	1.79E-04	0.00E+00	2.06E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.78E-05	5.13E-08	3.45E-06	7.31E-10	5.45E-09	0.00E+00	3.21E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	2.62E-03	5.19E-04	7.62E-04	9.55E-06	9.01E-05	0.00E+00	6.72E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	2.89E-02	5.71E-03	8.24E-03	1.05E-04	9.89E-04	0.00E+00	6.59E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	7.28E-03	9.84E-04	2.17E-03	2.67E-05	1.69E-04	0.00E+00	2.11E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	4.11E-07	3.29E-09	3.54E-07	5.08E-11	3.79E-10	0.00E+00	3.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.47E+01	2.77E+00	6.73E+00	5.52E-02	4.12E-01	0.00E+00	6.94E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	3.66E-01	7.87E-03	6.65E-02	3.09E-05	2.30E-04	0.00E+00	-8.69E-04	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.25E+01	2.14E-01	2.25E+00	1.80E-04	1.91E-03	0.00E+00	8.61E-01	0.00E+00
Renewable primary energy resources as material utilization	MJ	2.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.25E+01	2.14E-01	2.25E+00	1.80E-04	1.91E-03	0.00E+00	8.61E-01	0.00E+00
Non-renewable primary energy as energy carrier	MJ	2.47E+01	2.77E+00	6.74E+00	5.52E-02	4.12E-01	0.00E+00	6.94E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.76E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.15E+01	2.77E+00	6.74E+00	5.52E-02	4.12E-01	0.00E+00	6.94E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.40E-02	5.40E-04	4.72E-03	4.65E-07	3.47E-06	0.00E+00	8.08E-04	0.00E+00

\*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.

**GROUP 1: 1M<sup>2</sup> OF GIB® STANDARD 10MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.18E-07	5.77E-12	2.27E-08	5.99E-14	4.47E-13	0.00E+00	4.58E-10	0.00E+00
Non-hazardous waste disposed	kg	3.23E-02	7.14E-05	1.04E+00	7.88E-07	5.88E-06	0.00E+00	5.35E+00	0.00E+00
Radioactive waste disposed	kg	1.09E-04	6.03E-08	4.64E-05	8.09E-10	6.04E-09	0.00E+00	4.36E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	8.86E-02	0.00E+00	3.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	1.85E+00	1.99E-01	6.96E-01	4.11E-03	2.94E-02	0.00E+00	1.54E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.15E-07	5.87E-09	3.23E-08	2.24E-10	1.02E-09	0.00E+00	1.64E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.64E-02	7.51E-06	6.65E-03	1.05E-07	7.82E-07	0.00E+00	4.32E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	1.89E+01	1.18E+00	7.97E+00	1.39E-02	1.03E-01	0.00E+00	2.18E+01	0.00E+00
Human toxicity, cancer*	CTUh	3.87E-10	1.40E-11	1.87E-10	2.33E-13	1.75E-12	0.00E+00	2.77E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.00E-08	6.90E-10	7.92E-09	1.45E-11	1.03E-10	0.00E+00	2.82E-08	0.00E+00
Land use*	Pt	2.58E+01	3.13E-02	5.97E+00	1.27E-04	9.46E-04	0.00E+00	3.71E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.16E+00	2.07E-01	6.20E-01	4.10E-03	3.05E-02	0.00E+00	1.70E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.29E-12	2.76E-14	1.90E-12	3.89E-16	2.90E-15	0.00E+00	9.76E-13	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	6.61E-03	7.15E-04	1.96E-03	1.37E-05	1.22E-04	0.00E+00	1.61E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.04E-03	1.75E-04	3.10E-04	3.20E-06	3.03E-05	0.00E+00	3.58E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	4.33E-04	-3.04E-04	1.72E-04	1.35E-06	-5.41E-05	0.00E+00	3.51E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	4.12E-07	3.29E-09	3.54E-07	5.08E-11	3.79E-10	0.00E+00	3.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.40E+01	2.77E+00	6.53E+00	5.52E-02	4.12E-01	0.00E+00	6.81E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 2: 1M<sup>2</sup> OF GIB® AQUALINE 10MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.54E+00	2.42E-01	7.48E-01	4.79E-03	3.57E-02	0.00E+00	2.01E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	2.16E+00	2.32E-01	5.81E-01	4.79E-03	3.42E-02	0.00E+00	5.57E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.25E-01	1.01E-02	1.66E-01	4.74E-07	1.52E-03	0.00E+00	1.45E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.21E-04	2.89E-06	1.88E-04	3.48E-08	2.59E-07	0.00E+00	1.11E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.36E-12	2.70E-14	1.48E-12	3.80E-16	2.84E-15	0.00E+00	8.29E-13	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	1.00E-02	1.21E-03	2.77E-03	2.28E-05	2.07E-04	0.00E+00	2.09E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.71E-05	5.91E-08	3.33E-06	8.42E-10	6.28E-09	0.00E+00	3.21E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	3.04E-03	5.97E-04	8.33E-04	1.10E-05	1.04E-04	0.00E+00	6.73E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.35E-02	6.57E-03	9.04E-03	1.20E-04	1.14E-03	0.00E+00	6.75E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	8.51E-03	1.13E-03	2.38E-03	3.08E-05	1.95E-04	0.00E+00	2.13E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	7.31E-07	3.79E-09	4.10E-07	5.85E-11	4.36E-10	0.00E+00	3.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.83E+01	3.19E+00	7.34E+00	6.36E-02	4.74E-01	0.00E+00	6.98E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	3.82E-01	9.06E-03	6.92E-02	3.56E-05	2.65E-04	0.00E+00	-1.32E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.25E+01	2.46E-01	2.27E+00	2.08E-04	2.21E-03	0.00E+00	8.62E-01	0.00E+00
Renewable primary energy resources as material utilization	MJ	1.94E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.45E+01	2.46E-01	2.27E+00	2.08E-04	2.21E-03	0.00E+00	8.62E-01	0.00E+00
Non-renewable primary energy as energy carrier	MJ	2.84E+01	3.19E+00	7.35E+00	6.36E-02	4.74E-01	0.00E+00	6.99E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.47E+01	3.19E+00	7.35E+00	6.36E-02	4.74E-01	0.00E+00	6.99E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.52E-02	6.22E-04	4.94E-03	5.35E-07	3.99E-06	0.00E+00	7.98E-04	0.00E+00

\*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.

**GROUP 2: 1M<sup>2</sup> OF GIB® AQUALINE 10MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.10E-07	6.64E-12	2.14E-08	6.90E-14	5.15E-13	0.00E+00	4.58E-10	0.00E+00
Non-hazardous waste disposed	kg	4.16E-02	8.21E-05	1.17E+00	9.08E-07	6.78E-06	0.00E+00	6.24E+00	0.00E+00
Radioactive waste disposed	kg	1.36E-04	6.94E-08	5.08E-05	9.32E-10	6.95E-09	0.00E+00	4.36E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.02E-01	0.00E+00	3.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	2.14E+00	2.29E-01	7.36E-01	4.74E-03	3.38E-02	0.00E+00	1.47E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.35E-07	6.75E-09	3.58E-08	2.58E-10	1.17E-09	0.00E+00	1.73E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.99E-02	8.65E-06	7.24E-03	1.21E-07	9.00E-07	0.00E+00	4.32E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.13E+01	1.35E+00	8.75E+00	1.60E-02	1.19E-01	0.00E+00	2.45E+01	0.00E+00
Human toxicity, cancer*	CTUh	5.32E-10	1.61E-11	2.11E-10	2.68E-13	2.02E-12	0.00E+00	2.78E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	2.33E-08	7.94E-10	1.01E-08	1.67E-11	1.18E-10	0.00E+00	2.82E-08	0.00E+00
Land use*	Pt	2.82E+01	3.60E-02	6.39E+00	1.46E-04	1.09E-03	0.00E+00	3.71E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.49E+00	2.38E-01	6.63E-01	4.72E-03	3.52E-02	0.00E+00	1.63E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.28E-12	3.17E-14	1.90E-12	4.48E-16	3.34E-15	0.00E+00	9.76E-13	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	7.76E-03	8.23E-04	2.16E-03	1.58E-05	1.41E-04	0.00E+00	1.63E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.18E-03	2.02E-04	3.32E-04	3.68E-06	3.49E-05	0.00E+00	3.49E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	5.32E-04	-3.50E-04	1.87E-04	1.56E-06	-6.23E-05	0.00E+00	3.39E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	7.31E-07	3.79E-09	4.10E-07	5.85E-11	4.36E-10	0.00E+00	3.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.76E+01	3.19E+00	7.13E+00	6.36E-02	4.74E-01	0.00E+00	6.86E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 3: 1M<sup>2</sup> OF GIB® BRACELINE 10MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.80E+00	2.83E-01	7.94E-01	5.62E-03	4.19E-02	0.00E+00	2.02E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	2.42E+00	2.72E-01	6.26E-01	5.62E-03	4.01E-02	0.00E+00	5.62E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.26E-01	1.19E-02	1.68E-01	5.56E-07	1.78E-03	0.00E+00	1.46E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.05E-04	3.39E-06	1.84E-04	4.08E-08	3.04E-07	0.00E+00	1.11E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.33E-12	3.16E-14	1.47E-12	4.46E-16	3.33E-15	0.00E+00	8.29E-13	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	1.14E-02	1.41E-03	3.02E-03	2.67E-05	2.42E-04	0.00E+00	2.14E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.75E-05	6.93E-08	3.39E-06	9.88E-10	7.36E-09	0.00E+00	3.22E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	3.43E-03	7.00E-04	9.04E-04	1.29E-05	1.22E-04	0.00E+00	6.90E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.79E-02	7.71E-03	9.83E-03	1.41E-04	1.34E-03	0.00E+00	7.03E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	9.60E-03	1.33E-03	2.58E-03	3.62E-05	2.29E-04	0.00E+00	2.20E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	3.60E-07	4.44E-09	3.44E-07	6.86E-11	5.12E-10	0.00E+00	3.32E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.17E+01	3.74E+00	7.91E+00	7.46E-02	5.56E-01	0.00E+00	7.05E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	4.07E-01	1.06E-02	7.37E-02	4.17E-05	3.11E-04	0.00E+00	-1.28E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.28E+01	2.89E-01	2.30E+00	2.44E-04	2.59E-03	0.00E+00	8.62E-01	0.00E+00
Renewable primary energy resources as material utilization	MJ	3.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.28E+01	2.89E-01	2.30E+00	2.44E-04	2.59E-03	0.00E+00	8.62E-01	0.00E+00
Non-renewable primary energy as energy carrier	MJ	3.18E+01	3.74E+00	7.92E+00	7.46E-02	5.56E-01	0.00E+00	7.05E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.81E+01	3.74E+00	7.92E+00	7.46E-02	5.56E-01	0.00E+00	7.05E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.68E-02	7.29E-04	5.21E-03	6.28E-07	4.68E-06	0.00E+00	7.98E-04	0.00E+00

\*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.



**GROUP 3: 1M<sup>2</sup> OF GIB® BRACELINE 10MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.10E-07	7.79E-12	2.14E-08	8.09E-14	6.04E-13	0.00E+00	4.58E-10	0.00E+00
Non-hazardous waste disposed	kg	4.23E-02	9.63E-05	1.32E+00	1.07E-06	7.95E-06	0.00E+00	7.35E+00	0.00E+00
Radioactive waste disposed	kg	1.25E-04	8.14E-08	4.87E-05	1.09E-09	8.15E-09	0.00E+00	4.36E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.19E-01	0.00E+00	4.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	2.40E+00	2.69E-01	7.82E-01	5.56E-03	3.97E-02	0.00E+00	1.48E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.53E-07	7.92E-09	3.90E-08	3.02E-10	1.38E-09	0.00E+00	1.84E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.79E-02	1.01E-05	6.86E-03	1.42E-07	1.06E-06	0.00E+00	4.32E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.28E+01	1.59E+00	9.51E+00	1.87E-02	1.40E-01	0.00E+00	2.83E+01	0.00E+00
Human toxicity, cancer*	CTUh	4.92E-10	1.89E-11	2.03E-10	3.15E-13	2.37E-12	0.00E+00	2.78E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.26E-08	9.31E-10	8.08E-09	1.96E-11	1.39E-10	0.00E+00	2.83E-08	0.00E+00
Land use*	Pt	3.08E+01	4.23E-02	6.84E+00	1.71E-04	1.28E-03	0.00E+00	3.71E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.75E+00	2.79E-01	7.09E-01	5.54E-03	4.13E-02	0.00E+00	1.63E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.25E-12	3.72E-14	1.88E-12	5.26E-16	3.92E-15	0.00E+00	9.77E-13	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	8.84E-03	9.65E-04	2.34E-03	1.86E-05	1.65E-04	0.00E+00	1.67E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.32E-03	2.37E-04	3.56E-04	4.32E-06	4.09E-05	0.00E+00	3.54E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	5.84E-04	-4.10E-04	1.97E-04	1.83E-06	-7.31E-05	0.00E+00	3.43E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	3.61E-07	4.44E-09	3.45E-07	6.87E-11	5.12E-10	0.00E+00	3.35E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.10E+01	3.74E+00	7.71E+00	7.46E-02	5.56E-01	0.00E+00	6.92E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 4: 1M<sup>2</sup> OF GIB® FYRELINE 10MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.36E+00	2.26E-01	7.15E-01	4.48E-03	3.34E-02	0.00E+00	2.00E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	1.98E+00	2.17E-01	5.51E-01	4.48E-03	3.19E-02	0.00E+00	5.56E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.19E-01	9.46E-03	1.64E-01	4.43E-07	1.42E-03	0.00E+00	1.44E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	7.83E-04	2.71E-06	1.81E-04	3.25E-08	2.42E-07	0.00E+00	1.11E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	5.99E-12	2.52E-14	1.42E-12	3.56E-16	2.65E-15	0.00E+00	8.29E-13	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	9.18E-03	1.13E-03	2.63E-03	2.13E-05	1.93E-04	0.00E+00	2.07E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.70E-05	5.52E-08	3.31E-06	7.87E-10	5.87E-09	0.00E+00	3.21E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	2.79E-03	5.58E-04	7.89E-04	1.03E-05	9.70E-05	0.00E+00	6.66E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.07E-02	6.15E-03	8.56E-03	1.13E-04	1.06E-03	0.00E+00	6.64E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	7.76E-03	1.06E-03	2.25E-03	2.88E-05	1.82E-04	0.00E+00	2.10E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	3.53E-07	3.54E-09	3.43E-07	5.47E-11	4.08E-10	0.00E+00	3.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.61E+01	2.99E+00	6.96E+00	5.94E-02	4.43E-01	0.00E+00	6.96E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	3.71E-01	8.47E-03	6.72E-02	3.32E-05	2.48E-04	0.00E+00	-1.40E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.21E+01	2.30E-01	2.20E+00	1.94E-04	2.06E-03	0.00E+00	8.61E-01	0.00E+00
Renewable primary energy resources as material utilization	MJ	3.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.22E+01	2.30E-01	2.20E+00	1.94E-04	2.06E-03	0.00E+00	8.61E-01	0.00E+00
Non-renewable primary energy as energy carrier	MJ	2.61E+01	2.99E+00	6.97E+00	5.94E-02	4.43E-01	0.00E+00	6.96E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.24E+01	2.99E+00	6.97E+00	5.94E-02	4.43E-01	0.00E+00	6.96E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.43E-02	5.81E-04	4.77E-03	5.00E-07	3.73E-06	0.00E+00	7.96E-04	0.00E+00

\*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.

**GROUP 4: 1M<sup>2</sup> OF GIB® FYRELINE 10MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.09E-07	6.21E-12	2.11E-08	6.45E-14	4.81E-13	0.00E+00	4.58E-10	0.00E+00
Non-hazardous waste disposed	kg	3.43E-02	7.68E-05	1.11E+00	8.49E-07	6.33E-06	0.00E+00	5.80E+00	0.00E+00
Radioactive waste disposed	kg	1.10E-04	6.49E-08	4.63E-05	8.71E-10	6.50E-09	0.00E+00	4.36E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	9.53E-02	0.00E+00	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	2.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	1.96E+00	2.14E-01	7.05E-01	4.43E-03	3.16E-02	0.00E+00	1.46E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.23E-07	6.31E-09	3.37E-08	2.41E-10	1.10E-09	0.00E+00	1.68E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.61E-02	8.09E-06	6.58E-03	1.13E-07	8.41E-07	0.00E+00	4.32E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	1.97E+01	1.26E+00	8.31E+00	1.49E-02	1.11E-01	0.00E+00	2.32E+01	0.00E+00
Human toxicity, cancer*	CTUh	4.09E-10	1.50E-11	1.90E-10	2.51E-13	1.89E-12	0.00E+00	2.77E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.05E-08	7.42E-10	7.92E-09	1.56E-11	1.11E-10	0.00E+00	2.82E-08	0.00E+00
Land use*	Pt	2.66E+01	3.37E-02	6.10E+00	1.36E-04	1.02E-03	0.00E+00	3.71E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.32E+00	2.23E-01	6.33E-01	4.41E-03	3.29E-02	0.00E+00	1.61E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	7.83E-12	2.97E-14	1.82E-12	4.19E-16	3.12E-15	0.00E+00	9.76E-13	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	7.09E-03	7.70E-04	2.04E-03	1.48E-05	1.31E-04	0.00E+00	1.62E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.09E-03	1.89E-04	3.17E-04	3.44E-06	3.26E-05	0.00E+00	3.46E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	4.67E-04	-3.27E-04	1.76E-04	1.46E-06	-5.82E-05	0.00E+00	3.35E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	3.54E-07	3.54E-09	3.44E-07	5.47E-11	4.08E-10	0.00E+00	3.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.54E+01	2.98E+00	6.76E+00	5.94E-02	4.43E-01	0.00E+00	6.83E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 5: 1M<sup>2</sup> OF GIB® ULTRALINE 10MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.36E+00	2.26E-01	7.14E-01	4.48E-03	3.34E-02	0.00E+00	2.00E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	1.98E+00	2.16E-01	5.50E-01	4.48E-03	3.19E-02	0.00E+00	5.56E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.19E-01	9.46E-03	1.64E-01	4.43E-07	1.42E-03	0.00E+00	1.44E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	7.83E-04	2.70E-06	1.81E-04	3.25E-08	2.42E-07	0.00E+00	1.11E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	5.98E-12	2.52E-14	1.42E-12	3.55E-16	2.65E-15	0.00E+00	8.29E-13	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	9.15E-03	1.13E-03	2.62E-03	2.13E-05	1.93E-04	0.00E+00	2.07E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.70E-05	5.52E-08	3.31E-06	7.86E-10	5.87E-09	0.00E+00	3.21E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	2.78E-03	5.58E-04	7.88E-04	1.03E-05	9.69E-05	0.00E+00	6.66E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.07E-02	6.14E-03	8.54E-03	1.13E-04	1.06E-03	0.00E+00	6.64E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	7.74E-03	1.06E-03	2.24E-03	2.88E-05	1.82E-04	0.00E+00	2.10E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	3.52E-07	3.54E-09	3.43E-07	5.46E-11	4.08E-10	0.00E+00	3.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.58E+01	2.98E+00	6.91E+00	5.94E-02	4.43E-01	0.00E+00	6.96E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	3.71E-01	8.46E-03	6.72E-02	3.32E-05	2.48E-04	0.00E+00	-1.40E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.21E+01	2.30E-01	2.20E+00	1.94E-04	2.06E-03	0.00E+00	8.61E-01	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.22E+01	2.30E-01	2.20E+00	1.94E-04	2.06E-03	0.00E+00	8.61E-01	0.00E+00
Non-renewable primary energy as energy carrier	MJ	2.59E+01	2.98E+00	6.92E+00	5.94E-02	4.43E-01	0.00E+00	6.96E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.21E+01	2.98E+00	6.92E+00	5.94E-02	4.43E-01	0.00E+00	6.96E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.42E-02	5.81E-04	4.77E-03	5.00E-07	3.73E-06	0.00E+00	7.96E-04	0.00E+00

\*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.

**GROUP 5: 1M<sup>2</sup> OF GIB® ULTRALINE 10MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.09E-07	6.21E-12	2.11E-08	6.44E-14	4.81E-13	0.00E+00	4.58E-10	0.00E+00
Non-hazardous waste disposed	kg	3.43E-02	7.68E-05	1.11E+00	8.49E-07	6.33E-06	0.00E+00	5.80E+00	0.00E+00
Radioactive waste disposed	kg	1.09E-04	6.49E-08	4.62E-05	8.71E-10	6.49E-09	0.00E+00	4.36E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	9.53E-02	0.00E+00	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	2.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	1.96E+00	2.14E-01	7.04E-01	4.43E-03	3.16E-02	0.00E+00	1.46E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.23E-07	6.31E-09	3.36E-08	2.41E-10	1.10E-09	0.00E+00	1.68E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.60E-02	8.08E-06	6.58E-03	1.13E-07	8.41E-07	0.00E+00	4.32E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	1.96E+01	1.26E+00	8.28E+00	1.49E-02	1.11E-01	0.00E+00	2.32E+01	0.00E+00
Human toxicity, cancer*	CTUh	4.05E-10	1.50E-11	1.90E-10	2.50E-13	1.89E-12	0.00E+00	2.77E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.03E-08	7.42E-10	7.89E-09	1.56E-11	1.10E-10	0.00E+00	2.82E-08	0.00E+00
Land use*	Pt	2.66E+01	3.37E-02	6.10E+00	1.36E-04	1.02E-03	0.00E+00	3.71E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.32E+00	2.23E-01	6.32E-01	4.41E-03	3.29E-02	0.00E+00	1.61E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	7.82E-12	2.97E-14	1.82E-12	4.18E-16	3.12E-15	0.00E+00	9.76E-13	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	7.07E-03	7.69E-04	2.04E-03	1.48E-05	1.31E-04	0.00E+00	1.62E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.09E-03	1.89E-04	3.17E-04	3.44E-06	3.26E-05	0.00E+00	3.46E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	4.64E-04	-3.27E-04	1.75E-04	1.46E-06	-5.82E-05	0.00E+00	3.35E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	3.53E-07	3.54E-09	3.44E-07	5.47E-11	4.08E-10	0.00E+00	3.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.52E+01	2.98E+00	6.72E+00	5.94E-02	4.43E-01	0.00E+00	6.83E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 6: 1M<sup>2</sup> OF GIB® WEATHERLINE 10MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	2.64E+00	2.71E-01	8.76E-01	5.36E-03	3.99E-02	0.00E+00	9.13E-01	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	2.79E+00	2.59E-01	6.90E-01	5.36E-03	3.82E-02	0.00E+00	5.60E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-1.48E-01	1.13E-02	1.86E-01	5.31E-07	1.70E-03	0.00E+00	3.53E-01	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	3.72E-04	3.24E-06	1.08E-04	3.89E-08	2.90E-07	0.00E+00	1.11E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	4.42E-12	3.02E-14	1.13E-12	4.26E-16	3.17E-15	0.00E+00	8.29E-13	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	1.30E-02	1.35E-03	3.30E-03	2.55E-05	2.31E-04	0.00E+00	2.09E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.32E-05	6.61E-08	2.63E-06	9.42E-10	7.02E-09	0.00E+00	3.22E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	3.29E-03	6.68E-04	8.73E-04	1.23E-05	1.16E-04	0.00E+00	6.49E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.65E-02	7.36E-03	9.57E-03	1.35E-04	1.27E-03	0.00E+00	6.73E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	9.91E-03	1.27E-03	2.61E-03	3.45E-05	2.18E-04	0.00E+00	2.03E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	9.66E-07	4.24E-09	4.51E-07	6.54E-11	4.88E-10	0.00E+00	3.32E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.97E+01	3.57E+00	9.32E+00	7.12E-02	5.31E-01	0.00E+00	7.03E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	4.70E-01	1.01E-02	8.45E-02	3.98E-05	2.97E-04	0.00E+00	-3.30E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	9.73E+00	2.76E-01	1.88E+00	2.32E-04	2.47E-03	0.00E+00	8.62E-01	0.00E+00
Renewable primary energy resources as material utilization	MJ	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.25E+01	2.76E-01	1.88E+00	2.32E-04	2.47E-03	0.00E+00	8.62E-01	0.00E+00
Non-renewable primary energy as energy carrier	MJ	3.97E+01	3.57E+00	9.33E+00	7.12E-02	5.31E-01	0.00E+00	7.03E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	4.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	4.42E+01	3.57E+00	9.33E+00	7.12E-02	5.31E-01	0.00E+00	7.03E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.85E-02	6.96E-04	5.50E-03	5.99E-07	4.47E-06	0.00E+00	7.51E-04	0.00E+00

\*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.

**GROUP 6: 1M<sup>2</sup> OF GIB® WEATHERLINE 10MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2.13E-08	7.43E-12	5.64E-09	7.72E-14	5.76E-13	0.00E+00	4.58E-10	0.00E+00
Non-hazardous waste disposed	kg	6.80E-02	9.19E-05	1.30E+00	1.02E-06	7.58E-06	0.00E+00	7.10E+00	0.00E+00
Radioactive waste disposed	kg	2.47E-04	7.77E-08	7.03E-05	1.04E-09	7.78E-09	0.00E+00	4.36E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	5.70E-02	0.00E+00	3.88E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	4.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	7.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	2.76E+00	2.56E-01	8.10E-01	5.30E-03	3.78E-02	0.00E+00	1.20E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.74E-07	7.56E-09	4.27E-08	2.88E-10	1.31E-09	0.00E+00	1.79E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	3.07E-02	9.68E-06	9.13E-03	1.35E-07	1.01E-06	0.00E+00	4.32E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	3.68E+01	1.51E+00	1.18E+01	1.79E-02	1.33E-01	0.00E+00	2.71E+01	0.00E+00
Human toxicity, cancer*	CTUh	9.56E-10	1.80E-11	2.85E-10	3.00E-13	2.26E-12	0.00E+00	2.78E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	3.92E-08	8.89E-10	1.28E-08	1.87E-11	1.32E-10	0.00E+00	2.82E-08	0.00E+00
Land use*	Pt	2.83E+01	4.03E-02	6.33E+00	1.63E-04	1.22E-03	0.00E+00	3.71E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	2.59E+00	2.67E-01	8.05E-01	5.28E-03	3.94E-02	0.00E+00	1.30E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	5.35E-12	3.55E-14	1.37E-12	5.01E-16	3.74E-15	0.00E+00	9.76E-13	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	1.04E-02	9.21E-04	2.61E-03	1.77E-05	1.57E-04	0.00E+00	1.63E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.24E-03	2.26E-04	3.37E-04	4.12E-06	3.90E-05	0.00E+00	3.06E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	8.22E-04	-3.92E-04	2.31E-04	1.75E-06	-6.97E-05	0.00E+00	2.80E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	9.67E-07	4.24E-09	4.52E-07	6.55E-11	4.88E-10	0.00E+00	3.35E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.86E+01	3.57E+00	9.05E+00	7.11E-02	5.30E-01	0.00E+00	6.90E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 7: 1M<sup>2</sup> OF GIB® WIDELINE 10MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.20E+00	2.10E-01	7.04E-01	4.15E-03	3.09E-02	0.00E+00	2.10E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	1.86E+00	2.01E-01	5.31E-01	4.15E-03	2.96E-02	0.00E+00	5.54E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.65E-01	8.77E-03	1.73E-01	4.11E-07	1.32E-03	0.00E+00	1.55E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.29E-04	2.51E-06	1.90E-04	3.01E-08	2.25E-07	0.00E+00	1.11E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.30E-12	2.34E-14	1.48E-12	3.29E-16	2.46E-15	0.00E+00	8.29E-13	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	8.52E-03	1.05E-03	2.51E-03	1.97E-05	1.79E-04	0.00E+00	2.06E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.73E-05	5.12E-08	3.36E-06	7.29E-10	5.44E-09	0.00E+00	3.21E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	2.61E-03	5.18E-04	7.60E-04	9.53E-06	8.99E-05	0.00E+00	6.71E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	2.88E-02	5.70E-03	8.21E-03	1.04E-04	9.86E-04	0.00E+00	6.59E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	7.24E-03	9.81E-04	2.16E-03	2.67E-05	1.69E-04	0.00E+00	2.11E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	4.08E-07	3.29E-09	3.53E-07	5.06E-11	3.78E-10	0.00E+00	3.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.44E+01	2.77E+00	6.67E+00	5.51E-02	4.11E-01	0.00E+00	6.94E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	3.58E-01	7.85E-03	6.50E-02	3.08E-05	2.30E-04	0.00E+00	-9.10E-04	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.25E+01	2.13E-01	2.24E+00	1.80E-04	1.91E-03	0.00E+00	8.61E-01	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.25E+01	2.13E-01	2.24E+00	1.80E-04	1.91E-03	0.00E+00	8.61E-01	0.00E+00
Non-renewable primary energy as energy carrier	MJ	2.44E+01	2.77E+00	6.68E+00	5.51E-02	4.11E-01	0.00E+00	6.94E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.11E+01	2.77E+00	6.68E+00	5.51E-02	4.11E-01	0.00E+00	6.94E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.37E-02	5.39E-04	4.68E-03	4.64E-07	3.46E-06	0.00E+00	8.07E-04	0.00E+00

\*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.



**GROUP 7: 1M<sup>2</sup> OF GIB® WIDELINE 10MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.17E-07	5.76E-12	2.27E-08	5.97E-14	4.46E-13	0.00E+00	4.58E-10	0.00E+00
Non-hazardous waste disposed	kg	3.20E-02	7.12E-05	1.04E+00	7.87E-07	5.87E-06	0.00E+00	5.34E+00	0.00E+00
Radioactive waste disposed	kg	1.08E-04	6.02E-08	4.62E-05	8.07E-10	6.02E-09	0.00E+00	4.35E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	8.84E-02	0.00E+00	3.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	1.84E+00	1.99E-01	6.94E-01	4.11E-03	2.93E-02	0.00E+00	1.53E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.15E-07	5.85E-09	3.22E-08	2.23E-10	1.02E-09	0.00E+00	1.64E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.63E-02	7.50E-06	6.63E-03	1.05E-07	7.80E-07	0.00E+00	4.32E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	1.87E+01	1.17E+00	7.93E+00	1.38E-02	1.03E-01	0.00E+00	2.18E+01	0.00E+00
Human toxicity, cancer*	CTUh	3.83E-10	1.39E-11	1.87E-10	2.32E-13	1.75E-12	0.00E+00	2.77E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	9.83E-09	6.88E-10	7.89E-09	1.45E-11	1.02E-10	0.00E+00	2.82E-08	0.00E+00
Land use*	Pt	2.56E+01	3.12E-02	5.94E+00	1.26E-04	9.43E-04	0.00E+00	3.71E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.16E+00	2.06E-01	6.18E-01	4.09E-03	3.05E-02	0.00E+00	1.69E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.26E-12	2.75E-14	1.90E-12	3.88E-16	2.89E-15	0.00E+00	9.76E-13	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	6.57E-03	7.14E-04	1.95E-03	1.37E-05	1.22E-04	0.00E+00	1.61E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.03E-03	1.75E-04	3.09E-04	3.19E-06	3.02E-05	0.00E+00	3.57E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	4.30E-04	-3.03E-04	1.71E-04	1.35E-06	-5.40E-05	0.00E+00	3.49E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	4.09E-07	3.29E-09	3.54E-07	5.07E-11	3.78E-10	0.00E+00	3.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	2.37E+01	2.77E+00	6.48E+00	5.51E-02	4.11E-01	0.00E+00	6.81E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 8: 1M<sup>2</sup> OF GIB® AQUALINE 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	2.48E+00	3.38E-01	9.43E-01	6.71E-03	4.99E-02	0.00E+00	2.20E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	3.11E+00	3.24E-01	7.71E-01	6.71E-03	4.78E-02	0.00E+00	7.27E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.34E-01	1.41E-02	1.72E-01	6.64E-07	2.12E-03	0.00E+00	1.48E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.98E-04	4.04E-06	2.05E-04	4.87E-08	3.63E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	7.05E-12	3.77E-14	1.63E-12	5.33E-16	3.97E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	1.97E-02	1.69E-03	4.56E-03	3.19E-05	2.89E-04	0.00E+00	2.71E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.02E-05	8.26E-08	3.88E-06	1.18E-09	8.78E-09	0.00E+00	4.18E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	5.52E-03	8.35E-04	1.29E-03	1.54E-05	1.45E-04	0.00E+00	8.49E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	6.08E-02	9.19E-03	1.41E-02	1.69E-04	1.59E-03	0.00E+00	8.73E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	1.55E-02	1.58E-03	3.69E-03	4.31E-05	2.73E-04	0.00E+00	2.66E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	8.85E-07	5.30E-09	4.38E-07	8.19E-11	6.10E-10	0.00E+00	4.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.07E+01	4.46E+00	9.80E+00	8.90E-02	6.64E-01	0.00E+00	9.11E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	4.90E-01	1.27E-02	8.80E-02	4.98E-05	3.71E-04	0.00E+00	-3.64E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.37E+01	3.44E-01	2.50E+00	2.91E-04	3.08E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	2.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.58E+01	3.44E-01	2.50E+00	2.91E-04	3.08E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	4.08E+01	4.46E+00	9.82E+00	8.90E-02	6.64E-01	0.00E+00	9.11E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	4.72E+01	4.46E+00	9.82E+00	8.90E-02	6.64E-01	0.00E+00	9.11E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	3.06E-02	8.69E-04	5.91E-03	7.49E-07	5.58E-06	0.00E+00	9.92E-04	0.00E+00

\*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.

**GROUP 8: 1M<sup>2</sup> OF GIB® AQUALINE 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.10E-07	9.28E-12	2.12E-08	9.66E-14	7.20E-13	0.00E+00	5.95E-10	0.00E+00
Non-hazardous waste disposed	kg	5.84E-02	1.15E-04	1.54E+00	1.27E-06	9.48E-06	0.00E+00	8.90E+00	0.00E+00
Radioactive waste disposed	kg	2.06E-04	9.70E-08	6.49E-05	1.30E-09	9.72E-09	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.42E-01	0.00E+00	4.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	3.08E+00	3.20E-01	9.27E-01	6.64E-03	4.73E-02	0.00E+00	1.65E+00	0.00E+00
Respiratory inorganics	Disease incidences	2.83E-07	9.44E-09	6.27E-08	3.61E-10	1.64E-09	0.00E+00	2.30E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	2.66E-02	1.21E-05	8.58E-03	1.69E-07	1.26E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.72E+01	1.89E+00	1.10E+01	2.24E-02	1.67E-01	0.00E+00	3.37E+01	0.00E+00
Human toxicity, cancer*	CTUh	7.02E-10	2.25E-11	2.52E-10	3.75E-13	2.83E-12	0.00E+00	3.61E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	2.92E-08	1.11E-09	1.23E-08	2.34E-11	1.65E-10	0.00E+00	3.67E-08	0.00E+00
Land use*	Pt	3.50E+01	5.04E-02	7.61E+00	2.04E-04	1.52E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	2.42E+00	3.33E-01	8.53E-01	6.61E-03	4.92E-02	0.00E+00	1.80E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	9.08E-12	4.44E-14	2.07E-12	6.27E-16	4.67E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	1.55E-02	1.15E-03	3.58E-03	2.22E-05	1.97E-04	0.00E+00	2.11E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	2.04E-03	2.82E-04	4.93E-04	5.16E-06	4.88E-05	0.00E+00	4.11E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	9.81E-04	-4.89E-04	2.72E-04	2.19E-06	-8.71E-05	0.00E+00	3.83E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	8.86E-07	5.30E-09	4.39E-07	8.19E-11	6.10E-10	0.00E+00	4.35E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.96E+01	4.46E+00	9.52E+00	8.90E-02	6.63E-01	0.00E+00	8.94E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 9: 1M<sup>2</sup> OF GIB® BRACELINE 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	2.77E+00	3.86E-01	9.99E-01	7.67E-03	5.71E-02	0.00E+00	2.24E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	3.41E+00	3.70E-01	8.22E-01	7.67E-03	5.46E-02	0.00E+00	7.32E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.46E-01	1.62E-02	1.76E-01	7.59E-07	2.43E-03	0.00E+00	1.51E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.86E-04	4.62E-06	2.03E-04	5.56E-08	4.15E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	7.09E-12	4.30E-14	1.63E-12	6.09E-16	4.54E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	2.07E-02	1.93E-03	4.74E-03	3.64E-05	3.30E-04	0.00E+00	2.77E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.00E-05	9.43E-08	3.83E-06	1.35E-09	1.00E-08	0.00E+00	4.19E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	5.85E-03	9.54E-04	1.35E-03	1.76E-05	1.66E-04	0.00E+00	8.74E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	6.44E-02	1.05E-02	1.48E-02	1.93E-04	1.82E-03	0.00E+00	9.06E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	1.64E-02	1.81E-03	3.85E-03	4.93E-05	3.12E-04	0.00E+00	2.76E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	4.62E-07	6.05E-09	3.63E-07	9.36E-11	6.97E-10	0.00E+00	4.32E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.47E+01	5.10E+00	1.05E+01	1.02E-01	7.58E-01	0.00E+00	9.18E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	5.05E-01	1.45E-02	9.05E-02	5.69E-05	4.24E-04	0.00E+00	-3.47E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.40E+01	3.93E-01	2.55E+00	3.32E-04	3.52E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.41E+01	3.93E-01	2.55E+00	3.32E-04	3.52E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	4.48E+01	5.10E+00	1.05E+01	1.02E-01	7.58E-01	0.00E+00	9.18E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.54E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	5.13E+01	5.10E+00	1.05E+01	1.02E-01	7.58E-01	0.00E+00	9.18E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	3.22E-02	9.93E-04	6.18E-03	8.57E-07	6.38E-06	0.00E+00	9.96E-04	0.00E+00

\*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.

**GROUP 9: 1M<sup>2</sup> OF GIB® BRACELINE 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.13E-07	1.06E-11	2.18E-08	1.10E-13	8.22E-13	0.00E+00	5.95E-10	0.00E+00
Non-hazardous waste disposed	kg	5.83E-02	1.31E-04	1.71E+00	1.45E-06	1.08E-05	0.00E+00	1.02E+01	0.00E+00
Radioactive waste disposed	kg	1.90E-04	1.11E-07	6.18E-05	1.49E-09	1.11E-08	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.63E-01	0.00E+00	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	3.38E+00	3.66E-01	9.82E-01	7.58E-03	5.41E-02	0.00E+00	1.67E+00	0.00E+00
Respiratory inorganics	Disease incidences	2.94E-07	1.08E-08	6.47E-08	4.12E-10	1.88E-09	0.00E+00	2.43E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	2.41E-02	1.38E-05	8.13E-03	1.93E-07	1.44E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.90E+01	2.16E+00	1.19E+01	2.56E-02	1.90E-01	0.00E+00	3.80E+01	0.00E+00
Human toxicity, cancer*	CTUh	6.62E-10	2.57E-11	2.44E-10	4.29E-13	3.23E-12	0.00E+00	3.61E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.75E-08	1.27E-09	1.01E-08	2.68E-11	1.89E-10	0.00E+00	3.67E-08	0.00E+00
Land use*	Pt	3.78E+01	5.76E-02	8.09E+00	2.34E-04	1.74E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	2.70E+00	3.80E-01	9.06E-01	7.55E-03	5.62E-02	0.00E+00	1.83E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	9.16E-12	5.07E-14	2.08E-12	7.17E-16	5.34E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	1.62E-02	1.31E-03	3.72E-03	2.53E-05	2.25E-04	0.00E+00	2.16E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	2.15E-03	3.22E-04	5.13E-04	5.90E-06	5.58E-05	0.00E+00	4.21E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	1.01E-03	-5.59E-04	2.79E-04	2.50E-06	-9.96E-05	0.00E+00	3.91E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	4.63E-07	6.05E-09	3.64E-07	9.36E-11	6.98E-10	0.00E+00	4.36E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.36E+01	5.10E+00	1.02E+01	1.02E-01	7.58E-01	0.00E+00	9.01E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 10: 1M<sup>2</sup> OF GIB® FYRELINE 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	2.42E+00	3.38E-01	9.33E-01	6.71E-03	4.99E-02	0.00E+00	2.20E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	3.06E+00	3.24E-01	7.61E-01	6.71E-03	4.78E-02	0.00E+00	7.27E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.34E-01	1.41E-02	1.72E-01	6.64E-07	2.12E-03	0.00E+00	1.48E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.67E-04	4.04E-06	2.00E-04	4.87E-08	3.63E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.76E-12	3.77E-14	1.58E-12	5.33E-16	3.97E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	1.94E-02	1.69E-03	4.51E-03	3.19E-05	2.89E-04	0.00E+00	2.71E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.01E-05	8.25E-08	3.85E-06	1.18E-09	8.78E-09	0.00E+00	4.18E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	5.43E-03	8.35E-04	1.28E-03	1.54E-05	1.45E-04	0.00E+00	8.49E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	5.98E-02	9.19E-03	1.40E-02	1.69E-04	1.59E-03	0.00E+00	8.73E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	1.52E-02	1.58E-03	3.64E-03	4.31E-05	2.73E-04	0.00E+00	2.66E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	4.40E-07	5.30E-09	3.60E-07	8.19E-11	6.10E-10	0.00E+00	4.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.01E+01	4.46E+00	9.68E+00	8.90E-02	6.63E-01	0.00E+00	9.11E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	4.85E-01	1.27E-02	8.70E-02	4.98E-05	3.71E-04	0.00E+00	-3.64E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.34E+01	3.44E-01	2.45E+00	2.91E-04	3.08E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.35E+01	3.44E-01	2.45E+00	2.91E-04	3.08E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	4.01E+01	4.46E+00	9.70E+00	8.90E-02	6.63E-01	0.00E+00	9.11E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	4.65E+01	4.46E+00	9.70E+00	8.90E-02	6.63E-01	0.00E+00	9.11E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	3.03E-02	8.69E-04	5.84E-03	7.49E-07	5.58E-06	0.00E+00	9.92E-04	0.00E+00

\*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.

**GROUP 10: 1M<sup>2</sup> OF GIB® FYRELINE 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.09E-07	9.28E-12	2.12E-08	9.66E-14	7.20E-13	0.00E+00	5.95E-10	0.00E+00
Non-hazardous waste disposed	kg	5.22E-02	1.15E-04	1.53E+00	1.27E-06	9.48E-06	0.00E+00	8.89E+00	0.00E+00
Radioactive waste disposed	kg	1.81E-04	9.70E-08	6.04E-05	1.30E-09	9.72E-09	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.42E-01	0.00E+00	4.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	3.02E+00	3.20E-01	9.18E-01	6.64E-03	4.73E-02	0.00E+00	1.65E+00	0.00E+00
Respiratory inorganics	Disease incidences	2.79E-07	9.44E-09	6.18E-08	3.61E-10	1.64E-09	0.00E+00	2.29E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	2.29E-02	1.21E-05	7.93E-03	1.69E-07	1.26E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.64E+01	1.89E+00	1.09E+01	2.24E-02	1.67E-01	0.00E+00	3.37E+01	0.00E+00
Human toxicity, cancer*	CTUh	5.92E-10	2.25E-11	2.32E-10	3.75E-13	2.83E-12	0.00E+00	3.61E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.57E-08	1.11E-09	9.87E-09	2.34E-11	1.65E-10	0.00E+00	3.67E-08	0.00E+00
Land use*	Pt	3.44E+01	5.04E-02	7.49E+00	2.04E-04	1.52E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	2.36E+00	3.33E-01	8.43E-01	6.61E-03	4.92E-02	0.00E+00	1.80E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.74E-12	4.43E-14	2.01E-12	6.27E-16	4.67E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	1.52E-02	1.15E-03	3.54E-03	2.21E-05	1.97E-04	0.00E+00	2.11E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	2.01E-03	2.82E-04	4.87E-04	5.16E-06	4.88E-05	0.00E+00	4.11E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	9.39E-04	-4.89E-04	2.65E-04	2.19E-06	-8.71E-05	0.00E+00	3.83E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	4.42E-07	5.30E-09	3.60E-07	8.19E-11	6.10E-10	0.00E+00	4.35E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.90E+01	4.46E+00	9.42E+00	8.90E-02	6.63E-01	0.00E+00	8.94E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 11: 1M<sup>2</sup> OF GIB® STANDARD 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.68E+00	2.74E-01	8.15E-01	5.44E-03	4.05E-02	0.00E+00	2.27E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	2.35E+00	2.63E-01	6.40E-01	5.44E-03	3.88E-02	0.00E+00	7.20E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.68E-01	1.15E-02	1.75E-01	5.39E-07	1.72E-03	0.00E+00	1.55E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.52E-04	3.28E-06	1.98E-04	3.95E-08	2.94E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.26E-12	3.06E-14	1.50E-12	4.32E-16	3.22E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	1.08E-02	1.37E-03	3.00E-03	2.59E-05	2.35E-04	0.00E+00	2.64E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.00E-05	6.70E-08	3.85E-06	9.56E-10	7.13E-09	0.00E+00	4.17E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	3.30E-03	6.78E-04	9.05E-04	1.25E-05	1.18E-04	0.00E+00	8.30E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.65E-02	7.46E-03	9.81E-03	1.37E-04	1.29E-03	0.00E+00	8.34E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	9.23E-03	1.29E-03	2.58E-03	3.50E-05	2.22E-04	0.00E+00	2.58E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	4.72E-07	4.30E-09	3.66E-07	6.64E-11	4.95E-10	0.00E+00	4.30E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.10E+01	3.62E+00	8.12E+00	7.22E-02	5.39E-01	0.00E+00	9.02E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	4.34E-01	1.03E-02	7.81E-02	4.04E-05	3.01E-04	0.00E+00	-3.32E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.30E+01	2.80E-01	2.37E+00	2.36E-04	2.50E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	2.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.31E+01	2.80E-01	2.37E+00	2.36E-04	2.50E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	3.10E+01	3.62E+00	8.13E+00	7.22E-02	5.39E-01	0.00E+00	9.02E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.78E+01	3.62E+00	8.13E+00	7.22E-02	5.39E-01	0.00E+00	9.02E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.75E-02	7.06E-04	5.38E-03	6.08E-07	4.53E-06	0.00E+00	9.99E-04	0.00E+00

\*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.



**GROUP 11: 1M<sup>2</sup> OF GIB® STANDARD 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.15E-07	7.54E-12	2.23E-08	7.83E-14	5.84E-13	0.00E+00	5.94E-10	0.00E+00
Non-hazardous waste disposed	kg	3.80E-02	9.32E-05	1.28E+00	1.03E-06	7.69E-06	0.00E+00	7.09E+00	0.00E+00
Radioactive waste disposed	kg	1.15E-04	7.88E-08	4.91E-05	1.06E-09	7.89E-09	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.16E-01	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	2.33E+00	2.60E-01	8.03E-01	5.38E-03	3.84E-02	0.00E+00	1.69E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.46E-07	7.66E-09	3.84E-08	2.93E-10	1.33E-09	0.00E+00	2.12E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.70E-02	9.82E-06	6.93E-03	1.37E-07	1.02E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.25E+01	1.54E+00	9.53E+00	1.81E-02	1.35E-01	0.00E+00	2.85E+01	0.00E+00
Human toxicity, cancer*	CTUh	4.83E-10	1.83E-11	2.15E-10	3.05E-13	2.29E-12	0.00E+00	3.60E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.22E-08	9.01E-10	9.46E-09	1.90E-11	1.34E-10	0.00E+00	3.66E-08	0.00E+00
Land use*	Pt	3.10E+01	4.09E-02	6.90E+00	1.66E-04	1.24E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.63E+00	2.70E-01	7.25E-01	5.36E-03	3.99E-02	0.00E+00	1.85E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.20E-12	3.60E-14	1.92E-12	5.09E-16	3.79E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	8.34E-03	9.34E-04	2.33E-03	1.80E-05	1.60E-04	0.00E+00	2.07E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.29E-03	2.29E-04	3.62E-04	4.18E-06	3.96E-05	0.00E+00	4.12E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	5.55E-04	-3.97E-04	1.99E-04	1.77E-06	-7.07E-05	0.00E+00	3.89E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	4.73E-07	4.30E-09	3.66E-07	6.64E-11	4.95E-10	0.00E+00	4.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.02E+01	3.62E+00	7.90E+00	7.22E-02	5.38E-01	0.00E+00	8.85E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 12: 1M<sup>2</sup> OF GIB® TOUGHLINE 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	2.94E+00	3.60E-01	1.02E+00	7.15E-03	5.32E-02	0.00E+00	2.20E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	3.57E+00	3.45E-01	8.50E-01	7.15E-03	5.09E-02	0.00E+00	7.29E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.31E-01	1.51E-02	1.71E-01	7.07E-07	2.26E-03	0.00E+00	1.47E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.83E-04	4.31E-06	2.02E-04	5.19E-08	3.87E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	7.32E-12	4.01E-14	1.68E-12	5.68E-16	4.23E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	2.11E-02	1.80E-03	4.81E-03	3.40E-05	3.08E-04	0.00E+00	2.74E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.06E-05	8.79E-08	3.95E-06	1.26E-09	9.36E-09	0.00E+00	4.18E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	5.52E-03	8.89E-04	1.29E-03	1.64E-05	1.55E-04	0.00E+00	8.59E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	6.09E-02	9.78E-03	1.41E-02	1.80E-04	1.70E-03	0.00E+00	8.87E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	1.59E-02	1.69E-03	3.76E-03	4.60E-05	2.91E-04	0.00E+00	2.70E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	5.23E-07	5.64E-09	3.74E-07	8.72E-11	6.50E-10	0.00E+00	4.32E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.83E+01	4.75E+00	1.11E+01	9.49E-02	7.07E-01	0.00E+00	9.14E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	5.10E-01	1.35E-02	9.15E-02	5.31E-05	3.95E-04	0.00E+00	-3.64E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.51E+01	3.67E-01	2.76E+00	3.10E-04	3.29E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	1.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.52E+01	3.67E-01	2.76E+00	3.10E-04	3.29E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	4.84E+01	4.75E+00	1.11E+01	9.49E-02	7.07E-01	0.00E+00	9.15E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	5.48E+01	4.75E+00	1.11E+01	9.49E-02	7.07E-01	0.00E+00	9.15E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	3.43E-02	9.25E-04	6.55E-03	7.99E-07	5.95E-06	0.00E+00	9.92E-04	0.00E+00

\*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.

**GROUP 12: 1M<sup>2</sup> OF GIB® TOUGHLINE 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.08E-07	9.89E-12	2.10E-08	1.03E-13	7.67E-13	0.00E+00	5.95E-10	0.00E+00
Non-hazardous waste disposed	kg	5.68E-02	1.22E-04	1.61E+00	1.36E-06	1.01E-05	0.00E+00	9.50E+00	0.00E+00
Radioactive waste disposed	kg	2.25E-04	1.03E-07	6.81E-05	1.39E-09	1.04E-08	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	7.54E-02	0.00E+00	5.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	3.53E+00	3.41E-01	1.01E+00	7.07E-03	5.04E-02	0.00E+00	1.65E+00	0.00E+00
Respiratory inorganics	Disease incidences	3.17E-07	1.00E-08	6.86E-08	3.84E-10	1.75E-09	0.00E+00	2.36E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	2.83E-02	1.29E-05	8.88E-03	1.80E-07	1.34E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	4.22E+01	2.01E+00	1.39E+01	2.38E-02	1.78E-01	0.00E+00	3.56E+01	0.00E+00
Human toxicity, cancer*	CTUh	9.54E-10	2.40E-11	2.96E-10	4.00E-13	3.01E-12	0.00E+00	3.61E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	2.61E-08	1.18E-09	1.16E-08	2.50E-11	1.76E-10	0.00E+00	3.67E-08	0.00E+00
Land use*	Pt	3.63E+01	5.36E-02	7.76E+00	2.18E-04	1.62E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	2.87E+00	3.55E-01	9.31E-01	7.04E-03	5.24E-02	0.00E+00	1.80E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	9.39E-12	4.72E-14	2.12E-12	6.68E-16	4.98E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	1.68E-02	1.23E-03	3.81E-03	2.36E-05	2.10E-04	0.00E+00	2.13E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	2.05E-03	3.00E-04	4.95E-04	5.50E-06	5.20E-05	0.00E+00	4.14E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	1.12E-03	-5.21E-04	2.97E-04	2.33E-06	-9.28E-05	0.00E+00	3.85E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	5.25E-07	5.64E-09	3.75E-07	8.73E-11	6.50E-10	0.00E+00	4.35E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.70E+01	4.75E+00	1.08E+01	9.48E-02	7.07E-01	0.00E+00	8.98E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 13: 1M<sup>2</sup> OF GIB® ULTRALINE 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.82E+00	2.87E-01	8.39E-01	5.70E-03	4.24E-02	0.00E+00	2.29E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	2.49E+00	2.75E-01	6.64E-01	5.70E-03	4.06E-02	0.00E+00	7.21E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.72E-01	1.20E-02	1.75E-01	5.64E-07	1.80E-03	0.00E+00	1.57E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.84E-04	3.44E-06	2.04E-04	4.13E-08	3.08E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.31E-12	3.20E-14	1.51E-12	4.52E-16	3.37E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	1.17E-02	1.43E-03	3.15E-03	2.71E-05	2.46E-04	0.00E+00	2.66E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.52E-05	7.02E-08	4.77E-06	1.00E-09	7.46E-09	0.00E+00	4.17E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	3.51E-03	7.09E-04	9.40E-04	1.31E-05	1.23E-04	0.00E+00	8.35E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.89E-02	7.81E-03	1.02E-02	1.43E-04	1.35E-03	0.00E+00	8.43E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	9.85E-03	1.34E-03	2.68E-03	3.66E-05	2.32E-04	0.00E+00	2.60E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	4.91E-07	4.50E-09	3.69E-07	6.95E-11	5.18E-10	0.00E+00	4.30E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.28E+01	3.79E+00	8.43E+00	7.56E-02	5.64E-01	0.00E+00	9.04E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	5.30E-01	1.08E-02	9.50E-02	4.23E-05	3.15E-04	0.00E+00	-3.31E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.33E+01	2.93E-01	2.42E+00	2.47E-04	2.62E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.34E+01	2.93E-01	2.42E+00	2.47E-04	2.62E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	3.28E+01	3.79E+00	8.44E+00	7.56E-02	5.64E-01	0.00E+00	9.04E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.96E+01	3.79E+00	8.44E+00	7.56E-02	5.64E-01	0.00E+00	9.04E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	3.05E-02	7.39E-04	5.90E-03	6.36E-07	4.74E-06	0.00E+00	1.00E-03	0.00E+00

\*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.

**GROUP 13: 1M<sup>2</sup> OF GIB® ULTRALINE 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.09E-07	7.89E-12	2.12E-08	8.20E-14	6.11E-13	0.00E+00	5.94E-10	0.00E+00
Non-hazardous waste disposed	kg	4.53E-02	9.76E-05	1.33E+00	1.08E-06	8.05E-06	0.00E+00	7.43E+00	0.00E+00
Radioactive waste disposed	kg	1.35E-04	8.25E-08	5.26E-05	1.11E-09	8.26E-09	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.21E-01	0.00E+00	4.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	2.46E+00	2.72E-01	8.27E-01	5.63E-03	4.02E-02	0.00E+00	1.69E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.57E-07	8.02E-09	4.03E-08	3.06E-10	1.39E-09	0.00E+00	2.16E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.87E-02	1.03E-05	7.22E-03	1.43E-07	1.07E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.32E+01	1.61E+00	9.81E+00	1.90E-02	1.42E-01	0.00E+00	2.96E+01	0.00E+00
Human toxicity, cancer*	CTUh	5.07E-10	1.91E-11	2.19E-10	3.19E-13	2.40E-12	0.00E+00	3.60E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.30E-08	9.43E-10	9.55E-09	1.99E-11	1.40E-10	0.00E+00	3.67E-08	0.00E+00
Land use*	Pt	3.37E+01	4.28E-02	7.36E+00	1.74E-04	1.29E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.77E+00	2.83E-01	7.48E-01	5.61E-03	4.18E-02	0.00E+00	1.85E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.21E-12	3.77E-14	1.92E-12	5.32E-16	3.97E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	9.07E-03	9.78E-04	2.45E-03	1.88E-05	1.67E-04	0.00E+00	2.08E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.41E-03	2.40E-04	3.82E-04	4.38E-06	4.15E-05	0.00E+00	4.13E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	5.98E-04	-4.16E-04	2.06E-04	1.86E-06	-7.40E-05	0.00E+00	3.90E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	4.92E-07	4.50E-09	3.70E-07	6.95E-11	5.19E-10	0.00E+00	4.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.18E+01	3.79E+00	8.17E+00	7.56E-02	5.63E-01	0.00E+00	8.87E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 14: 1M<sup>2</sup> OF GIB® WEATHERLINE 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	3.30E+00	3.48E-01	1.02E+00	6.91E-03	5.14E-02	0.00E+00	1.12E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	3.46E+00	3.33E-01	8.32E-01	6.91E-03	4.92E-02	0.00E+00	7.27E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-1.64E-01	1.46E-02	1.89E-01	6.84E-07	2.19E-03	0.00E+00	3.94E-01	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	4.15E-04	4.16E-06	1.20E-04	5.01E-08	3.74E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	4.87E-12	3.88E-14	1.25E-12	5.49E-16	4.09E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	1.62E-02	1.74E-03	3.94E-03	3.28E-05	2.98E-04	0.00E+00	2.68E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.62E-05	8.50E-08	3.18E-06	1.21E-09	9.05E-09	0.00E+00	4.18E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	4.12E-03	8.60E-04	1.04E-03	1.59E-05	1.49E-04	0.00E+00	8.20E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	4.58E-02	9.46E-03	1.14E-02	1.74E-04	1.64E-03	0.00E+00	8.59E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	1.24E-02	1.63E-03	3.11E-03	4.44E-05	2.81E-04	0.00E+00	2.54E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	9.50E-07	5.45E-09	4.50E-07	8.43E-11	6.29E-10	0.00E+00	4.31E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.88E+01	4.60E+00	1.12E+01	9.17E-02	6.83E-01	0.00E+00	9.13E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	5.51E-01	1.30E-02	9.85E-02	5.13E-05	3.82E-04	0.00E+00	-5.55E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.07E+01	3.54E-01	2.08E+00	3.00E-04	3.18E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	2.54E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.33E+01	3.54E-01	2.08E+00	3.00E-04	3.18E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	4.88E+01	4.60E+00	1.12E+01	9.17E-02	6.83E-01	0.00E+00	9.13E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	4.64E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	5.35E+01	4.60E+00	1.12E+01	9.17E-02	6.83E-01	0.00E+00	9.13E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	3.30E-02	8.95E-04	6.32E-03	7.72E-07	5.75E-06	0.00E+00	9.47E-04	0.00E+00

\*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.

**GROUP 14: 1M<sup>2</sup> OF GIB® WEATHERLINE 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2.15E-08	9.56E-12	5.69E-09	9.95E-14	7.41E-13	0.00E+00	5.95E-10	0.00E+00
Non-hazardous waste disposed	kg	7.91E-02	1.18E-04	1.57E+00	1.31E-06	9.76E-06	0.00E+00	9.19E+00	0.00E+00
Radioactive waste disposed	kg	2.77E-04	9.99E-08	7.72E-05	1.34E-09	1.00E-08	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	7.29E-02	0.00E+00	5.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	4.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	7.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	3.43E+00	3.30E-01	9.53E-01	6.84E-03	4.87E-02	0.00E+00	1.38E+00	0.00E+00
Respiratory inorganics	Disease incidences	2.20E-07	9.72E-09	5.15E-08	3.71E-10	1.69E-09	0.00E+00	2.31E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	3.39E-02	1.24E-05	9.87E-03	1.74E-07	1.30E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	4.36E+01	1.95E+00	1.41E+01	2.30E-02	1.72E-01	0.00E+00	3.50E+01	0.00E+00
Human toxicity, cancer*	CTUh	1.13E-09	2.32E-11	3.27E-10	3.87E-13	2.91E-12	0.00E+00	3.60E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	4.28E-08	1.14E-09	1.46E-08	2.41E-11	1.70E-10	0.00E+00	3.67E-08	0.00E+00
Land use*	Pt	3.46E+01	5.19E-02	7.45E+00	2.11E-04	1.57E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	3.23E+00	3.43E-01	9.45E-01	6.81E-03	5.07E-02	0.00E+00	1.49E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	5.88E-12	4.57E-14	1.51E-12	6.46E-16	4.81E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	1.29E-02	1.18E-03	3.13E-03	2.28E-05	2.03E-04	0.00E+00	2.10E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.55E-03	2.90E-04	4.00E-04	5.31E-06	5.03E-05	0.00E+00	3.68E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	1.01E-03	-5.04E-04	2.69E-04	2.25E-06	-8.98E-05	0.00E+00	3.25E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	9.52E-07	5.46E-09	4.50E-07	8.44E-11	6.29E-10	0.00E+00	4.35E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	4.75E+01	4.59E+00	1.09E+01	9.17E-02	6.83E-01	0.00E+00	8.96E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 15: 1M<sup>2</sup> OF GIB® WIDELINE 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.68E+00	2.74E-01	8.19E-01	5.44E-03	4.05E-02	0.00E+00	2.30E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	2.36E+00	2.63E-01	6.41E-01	5.44E-03	3.88E-02	0.00E+00	7.20E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.80E-01	1.15E-02	1.78E-01	5.39E-07	1.72E-03	0.00E+00	1.58E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	8.65E-04	3.28E-06	2.00E-04	3.95E-08	2.94E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	6.39E-12	3.06E-14	1.52E-12	4.32E-16	3.22E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	1.08E-02	1.37E-03	3.00E-03	2.59E-05	2.35E-04	0.00E+00	2.64E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	1.99E-05	6.70E-08	3.82E-06	9.56E-10	7.13E-09	0.00E+00	4.17E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	3.31E-03	6.78E-04	9.06E-04	1.25E-05	1.18E-04	0.00E+00	8.33E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	3.66E-02	7.46E-03	9.83E-03	1.37E-04	1.29E-03	0.00E+00	8.36E-03	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	9.25E-03	1.29E-03	2.58E-03	3.50E-05	2.22E-04	0.00E+00	2.59E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	5.03E-07	4.30E-09	3.71E-07	6.64E-11	4.95E-10	0.00E+00	4.30E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.11E+01	3.63E+00	8.14E+00	7.22E-02	5.39E-01	0.00E+00	9.02E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	4.29E-01	1.03E-02	7.73E-02	4.04E-05	3.01E-04	0.00E+00	-3.18E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.32E+01	2.80E-01	2.39E+00	2.36E-04	2.50E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.32E+01	2.80E-01	2.39E+00	2.36E-04	2.50E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	3.11E+01	3.63E+00	8.15E+00	7.22E-02	5.39E-01	0.00E+00	9.02E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.80E+01	3.63E+00	8.15E+00	7.22E-02	5.39E-01	0.00E+00	9.02E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	2.75E-02	7.06E-04	5.37E-03	6.08E-07	4.53E-06	0.00E+00	1.00E-03	0.00E+00

\*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.



**GROUP 15: 1M<sup>2</sup> OF GIB® WIDELINE 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.18E-07	7.54E-12	2.27E-08	7.84E-14	5.84E-13	0.00E+00	5.94E-10	0.00E+00
Non-hazardous waste disposed	kg	3.81E-02	9.32E-05	1.28E+00	1.03E-06	7.69E-06	0.00E+00	7.08E+00	0.00E+00
Radioactive waste disposed	kg	1.16E-04	7.88E-08	4.93E-05	1.06E-09	7.89E-09	0.00E+00	5.66E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.16E-01	0.00E+00	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	2.33E+00	2.60E-01	8.06E-01	5.38E-03	3.84E-02	0.00E+00	1.71E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.47E-07	7.66E-09	3.84E-08	2.93E-10	1.33E-09	0.00E+00	2.12E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.72E-02	9.82E-06	6.96E-03	1.37E-07	1.02E-06	0.00E+00	5.61E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	2.25E+01	1.54E+00	9.54E+00	1.81E-02	1.35E-01	0.00E+00	2.85E+01	0.00E+00
Human toxicity, cancer*	CTUh	4.84E-10	1.83E-11	2.16E-10	3.05E-13	2.29E-12	0.00E+00	3.60E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.23E-08	9.01E-10	9.47E-09	1.90E-11	1.34E-10	0.00E+00	3.67E-08	0.00E+00
Land use*	Pt	3.10E+01	4.09E-02	6.90E+00	1.66E-04	1.24E-03	0.00E+00	4.82E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	1.63E+00	2.70E-01	7.28E-01	5.36E-03	3.99E-02	0.00E+00	1.88E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.37E-12	3.60E-14	1.96E-12	5.09E-16	3.79E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	8.36E-03	9.34E-04	2.33E-03	1.80E-05	1.60E-04	0.00E+00	2.07E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	1.30E-03	2.29E-04	3.63E-04	4.18E-06	3.96E-05	0.00E+00	4.15E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	5.56E-04	-3.97E-04	2.00E-04	1.77E-06	-7.07E-05	0.00E+00	3.93E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	5.04E-07	4.30E-09	3.72E-07	6.64E-11	4.95E-10	0.00E+00	4.34E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	3.03E+01	3.62E+00	7.92E+00	7.22E-02	5.38E-01	0.00E+00	8.85E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 16: 1M<sup>2</sup> OF GIB® X-BLOCK 13MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	1.03E+01	5.86E-01	2.32E+00	1.17E-02	8.69E-02	0.00E+00	2.29E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	1.09E+01	5.62E-01	2.14E+00	1.17E-02	8.32E-02	0.00E+00	7.52E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.59E-01	2.45E-02	1.76E-01	1.16E-06	3.70E-03	0.00E+00	1.54E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	1.93E-03	7.02E-06	3.86E-04	8.48E-08	6.32E-07	0.00E+00	1.44E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	1.56E-11	6.54E-14	3.12E-12	9.28E-16	6.91E-15	0.00E+00	1.08E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	1.01E-01	2.93E-03	1.89E-02	5.55E-05	5.03E-04	0.00E+00	3.02E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	3.27E-05	1.43E-07	6.09E-06	2.05E-09	1.53E-08	0.00E+00	4.22E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	2.23E-02	1.45E-03	4.26E-03	2.68E-05	2.53E-04	0.00E+00	9.83E-04	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	2.70E-01	1.59E-02	5.13E-02	2.94E-04	2.77E-03	0.00E+00	1.04E-02	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	6.00E-02	2.75E-03	1.16E-02	7.52E-05	4.75E-04	0.00E+00	3.13E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	9.31E-05	9.19E-09	1.67E-05	1.43E-10	1.06E-09	0.00E+00	4.36E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	1.64E+02	7.75E+00	3.16E+01	1.55E-01	1.16E+00	0.00E+00	9.47E+00	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	9.51E-01	2.20E-02	1.70E-01	8.68E-05	6.46E-04	0.00E+00	-3.11E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.96E+01	5.97E-01	3.52E+00	5.07E-04	5.37E-03	0.00E+00	1.12E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	1.33E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	3.28E+01	5.97E-01	3.52E+00	5.07E-04	5.37E-03	0.00E+00	1.12E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	1.66E+02	7.75E+00	3.18E+01	1.55E-01	1.16E+00	0.00E+00	9.47E+00	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	1.72E+02	7.75E+00	3.18E+01	1.55E-01	1.16E+00	0.00E+00	9.47E+00	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	5.72E-02	1.51E-03	1.06E-02	1.31E-06	9.72E-06	0.00E+00	1.00E-03	0.00E+00

\*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.

**GROUP 16: 1M<sup>2</sup> OF GIB® X-BLOCK 13MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.18E-07	1.61E-11	2.27E-08	1.68E-13	1.25E-12	0.00E+00	5.95E-10	0.00E+00
Non-hazardous waste disposed	kg	3.16E-01	1.99E-04	2.67E+00	2.22E-06	1.65E-05	0.00E+00	1.72E+01	0.00E+00
Radioactive waste disposed	kg	1.10E-03	1.68E-07	2.21E-04	2.27E-09	1.69E-08	0.00E+00	5.67E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.22E-01	0.00E+00	8.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	1.08E+01	5.56E-01	2.28E+00	1.16E-02	8.24E-02	0.00E+00	1.72E+00	0.00E+00
Respiratory inorganics	Disease incidences	1.44E-06	1.64E-08	2.68E-07	6.28E-10	2.86E-09	0.00E+00	2.99E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	1.17E-01	2.10E-05	2.44E-02	2.94E-07	2.19E-06	0.00E+00	5.62E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	5.82E+02	3.28E+00	1.11E+02	3.90E-02	2.90E-01	0.00E+00	4.76E+01	0.00E+00
Human toxicity, cancer*	CTUh	2.15E-09	3.90E-11	5.03E-10	6.54E-13	4.92E-12	0.00E+00	3.63E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	1.56E-07	1.93E-09	3.41E-08	4.08E-11	2.88E-10	0.00E+00	3.69E-08	0.00E+00
Land use*	Pt	3.49E+01	8.74E-02	7.51E+00	3.56E-04	2.65E-03	0.00E+00	4.83E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	9.99E+00	5.78E-01	2.19E+00	1.15E-02	8.57E-02	0.00E+00	1.88E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	1.92E-11	7.70E-14	3.83E-12	1.09E-15	8.14E-15	0.00E+00	1.27E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	7.90E-02	2.00E-03	1.48E-02	3.86E-05	3.43E-04	0.00E+00	2.33E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	8.90E-03	4.89E-04	1.71E-03	8.99E-06	8.50E-05	0.00E+00	4.59E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	4.36E-03	-8.49E-04	8.69E-04	3.81E-06	-1.52E-04	0.00E+00	4.16E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	9.32E-05	9.20E-09	1.67E-05	1.43E-10	1.06E-09	0.00E+00	4.40E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	1.43E+02	7.74E+00	2.78E+01	1.55E-01	1.15E+00	0.00E+00	9.30E+00	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 17: 1M<sup>2</sup> OF GIB® FYRELINE 16MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	3.58E+00	4.76E-01	1.17E+00	9.45E-03	7.03E-02	0.00E+00	2.42E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	4.24E+00	4.56E-01	9.91E-01	9.45E-03	6.73E-02	0.00E+00	9.00E-01	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.53E-01	1.99E-02	1.81E-01	9.36E-07	2.99E-03	0.00E+00	1.52E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	9.46E-04	5.69E-06	2.17E-04	6.86E-08	5.11E-07	0.00E+00	1.77E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.05E-12	5.30E-14	1.84E-12	7.51E-16	5.59E-15	0.00E+00	1.33E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H+ eq.	2.66E-02	2.37E-03	5.86E-03	4.49E-05	4.07E-04	0.00E+00	3.38E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.36E-05	1.16E-07	4.48E-06	1.66E-09	1.24E-08	0.00E+00	5.15E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	7.37E-03	1.18E-03	1.65E-03	2.17E-05	2.04E-04	0.00E+00	1.05E-03	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	8.11E-02	1.29E-02	1.80E-02	2.38E-04	2.24E-03	0.00E+00	1.10E-02	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	2.07E-02	2.23E-03	4.69E-03	6.08E-05	3.84E-04	0.00E+00	3.28E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	5.50E-07	7.46E-09	3.80E-07	1.15E-10	8.60E-10	0.00E+00	5.32E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	5.55E+01	6.28E+00	1.27E+01	1.25E-01	9.35E-01	0.00E+00	1.13E+01	0.00E+00
Water Deprivation Potential	m <sup>3</sup> world equiv.	6.18E-01	1.78E-02	1.10E-01	7.02E-05	5.23E-04	0.00E+00	-5.82E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.53E+01	4.85E-01	2.80E+00	4.10E-04	4.34E-03	0.00E+00	1.38E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.53E+01	4.85E-01	2.80E+00	4.10E-04	4.34E-03	0.00E+00	1.38E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	5.56E+01	6.28E+00	1.27E+01	1.25E-01	9.35E-01	0.00E+00	1.13E+01	0.00E+00
Non-renewable primary energy as material utilization	MJ	6.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	6.22E+01	6.28E+00	1.27E+01	1.25E-01	9.35E-01	0.00E+00	1.13E+01	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	3.77E-02	1.22E-03	7.16E-03	1.06E-06	7.87E-06	0.00E+00	1.19E-03	0.00E+00

\*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.

**GROUP 17: 1M<sup>2</sup> OF GIB® FYRELINE 16MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.11E-07	1.31E-11	2.14E-08	1.36E-13	1.01E-12	0.00E+00	7.31E-10	0.00E+00
Non-hazardous waste disposed	kg	8.05E-02	1.62E-04	2.05E+00	1.79E-06	1.33E-05	0.00E+00	1.26E+01	0.00E+00
Radioactive waste disposed	kg	2.56E-04	1.37E-07	7.52E-05	1.84E-09	1.37E-08	0.00E+00	6.96E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	2.00E-01	0.00E+00	7.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	4.19E+00	4.51E-01	1.15E+00	9.35E-03	6.66E-02	0.00E+00	1.84E+00	0.00E+00
Respiratory inorganics	Disease incidences	3.74E-07	1.33E-08	7.96E-08	5.08E-10	2.31E-09	0.00E+00	2.98E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	3.06E-02	1.70E-05	9.45E-03	2.38E-07	1.77E-06	0.00E+00	6.90E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	3.43E+01	2.66E+00	1.41E+01	3.15E-02	2.35E-01	0.00E+00	4.68E+01	0.00E+00
Human toxicity, cancer*	CTUh	8.12E-10	3.17E-11	2.82E-10	5.29E-13	3.98E-12	0.00E+00	4.44E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	2.20E-08	1.56E-09	1.21E-08	3.30E-11	2.33E-10	0.00E+00	4.52E-08	0.00E+00
Land use*	Pt	4.50E+01	7.09E-02	9.38E+00	2.88E-04	2.15E-03	0.00E+00	5.93E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	3.50E+00	4.69E-01	1.07E+00	9.31E-03	6.93E-02	0.00E+00	2.00E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	1.03E-11	6.24E-14	2.31E-12	8.84E-16	6.58E-15	0.00E+00	1.56E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	2.09E-02	1.62E-03	4.61E-03	3.12E-05	2.77E-04	0.00E+00	2.63E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	2.69E-03	3.97E-04	6.17E-04	7.27E-06	6.88E-05	0.00E+00	4.83E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	1.30E-03	-6.89E-04	3.35E-04	3.08E-06	-1.23E-04	0.00E+00	4.34E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	5.52E-07	7.46E-09	3.81E-07	1.15E-10	8.60E-10	0.00E+00	5.36E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	5.41E+01	6.28E+00	1.24E+01	1.25E-01	9.34E-01	0.00E+00	1.11E+01	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 18: 1M<sup>2</sup> OF GIB® FYRELINE 19MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	4.15E+00	5.29E-01	1.31E+00	1.05E-02	7.83E-02	0.00E+00	2.68E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	4.84E+00	5.07E-01	1.12E+00	1.05E-02	7.49E-02	0.00E+00	1.06E+00	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-6.90E-01	2.22E-02	1.90E-01	1.04E-06	3.33E-03	0.00E+00	1.61E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	1.04E-03	6.34E-06	2.39E-04	7.64E-08	5.69E-07	0.00E+00	2.10E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	8.76E-12	5.90E-14	1.99E-12	8.36E-16	6.22E-15	0.00E+00	1.57E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	3.39E-02	2.64E-03	7.24E-03	5.00E-05	4.53E-04	0.00E+00	3.95E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	2.70E-05	1.29E-07	5.10E-06	1.85E-09	1.38E-08	0.00E+00	6.11E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	9.21E-03	1.31E-03	2.00E-03	2.42E-05	2.27E-04	0.00E+00	1.21E-03	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	1.01E-01	1.44E-02	2.18E-02	2.65E-04	2.50E-03	0.00E+00	1.27E-02	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	2.59E-02	2.48E-03	5.68E-03	6.77E-05	4.28E-04	0.00E+00	3.76E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	5.90E-07	8.30E-09	3.89E-07	1.28E-10	9.57E-10	0.00E+00	6.30E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	6.31E+01	6.99E+00	1.43E+01	1.40E-01	1.04E+00	0.00E+00	1.34E+01	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	7.05E-01	1.98E-02	1.25E-01	7.81E-05	5.82E-04	0.00E+00	-7.86E-03	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	1.63E+01	5.39E-01	2.99E+00	4.56E-04	4.84E-03	0.00E+00	1.64E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.64E+01	5.39E-01	2.99E+00	4.56E-04	4.84E-03	0.00E+00	1.64E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	6.32E+01	6.99E+00	1.43E+01	1.40E-01	1.04E+00	0.00E+00	1.34E+01	0.00E+00
Non-renewable primary energy as material utilization	MJ	7.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	7.02E+01	6.99E+00	1.43E+01	1.40E-01	1.04E+00	0.00E+00	1.34E+01	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	4.15E-02	1.36E-03	7.86E-03	1.18E-06	8.76E-06	0.00E+00	1.39E-03	0.00E+00

\*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.

**GROUP 18: 1M<sup>2</sup> OF GIB® FYRELINE 19MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.15E-07	1.45E-11	2.21E-08	1.52E-13	1.13E-12	0.00E+00	8.68E-10	0.00E+00
Non-hazardous waste disposed	kg	9.19E-02	1.80E-04	2.26E+00	1.99E-06	1.49E-05	0.00E+00	1.41E+01	0.00E+00
Radioactive waste disposed	kg	3.14E-04	1.52E-07	8.73E-05	2.05E-09	1.52E-08	0.00E+00	8.26E-05	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	2.23E-01	0.00E+00	7.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	1.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	3.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	4.79E+00	5.02E-01	1.29E+00	1.04E-02	7.42E-02	0.00E+00	2.06E+00	0.00E+00
Respiratory inorganics	Disease incidences	4.89E-07	1.48E-08	1.01E-07	5.66E-10	2.57E-09	0.00E+00	3.43E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	3.61E-02	1.89E-05	1.06E-02	2.65E-07	1.97E-06	0.00E+00	8.19E-03	0.00E+00
Ecotoxicity freshwater*	CTUe	3.75E+01	2.96E+00	1.54E+01	3.51E-02	2.61E-01	0.00E+00	5.22E+01	0.00E+00
Human toxicity, cancer*	CTUh	9.03E-10	3.52E-11	3.10E-10	5.89E-13	4.43E-12	0.00E+00	5.27E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	2.48E-08	1.74E-09	1.38E-08	3.68E-11	2.59E-10	0.00E+00	5.36E-08	0.00E+00
Land use*	Pt	4.91E+01	7.89E-02	1.01E+01	3.21E-04	2.39E-03	0.00E+00	7.04E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	4.06E+00	5.22E-01	1.21E+00	1.04E-02	7.71E-02	0.00E+00	2.22E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	1.11E-11	6.95E-14	2.50E-12	9.84E-16	7.33E-15	0.00E+00	1.85E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	2.68E-02	1.80E-03	5.71E-03	3.47E-05	3.08E-04	0.00E+00	3.08E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	3.34E-03	4.42E-04	7.41E-04	8.09E-06	7.65E-05	0.00E+00	5.46E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	1.63E-03	-7.67E-04	3.99E-04	3.43E-06	-1.37E-04	0.00E+00	4.84E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	5.93E-07	8.30E-09	3.90E-07	1.28E-10	9.57E-10	0.00E+00	6.36E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	6.14E+01	6.99E+00	1.39E+01	1.40E-01	1.04E+00	0.00E+00	1.31E+01	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

## GROUP 19: 1M<sup>2</sup> OF GIB® BARRIERLINE 25MM

Environmental impact – EN15804+A2	Unit	Production	Distribution	Installation	End-of-life				Benefits & loads
		A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential	kg CO <sub>2</sub> -eq.	5.66E+00	6.88E-01	1.68E+00	1.37E-02	1.02E-01	0.00E+00	3.47E+00	0.00E+00
Global warming potential (fossil)	kg CO <sub>2</sub> -eq.	6.54E+00	6.59E-01	1.47E+00	1.37E-02	9.77E-02	0.00E+00	1.40E+00	0.00E+00
Global warming potential (biogenic)	kg CO <sub>2</sub> -eq.	-8.84E-01	2.88E-02	2.19E-01	1.36E-06	4.34E-03	0.00E+00	2.07E+00	0.00E+00
Global warming potential (land use change)	kg CO <sub>2</sub> -eq.	1.32E-03	8.23E-06	2.97E-04	9.95E-08	7.41E-07	0.00E+00	2.76E-04	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	1.05E-11	7.67E-14	2.38E-12	1.09E-15	8.11E-15	0.00E+00	2.07E-12	0.00E+00
Acidification potential - terrestrial and freshwater	Mole of H <sup>+</sup> eq.	3.65E-02	3.43E-03	7.86E-03	6.52E-05	5.91E-04	0.00E+00	5.19E-03	0.00E+00
Eutrophication potential - freshwater	kg P eq.	3.23E-05	1.68E-07	6.07E-06	2.41E-09	1.79E-08	0.00E+00	8.03E-07	0.00E+00
Eutrophication potential - marine	kg N eq.	9.66E-03	1.70E-03	2.12E-03	3.15E-05	2.96E-04	0.00E+00	1.59E-03	0.00E+00
Eutrophication potential - terrestrial	Mole of N eq.	1.07E-01	1.87E-02	2.33E-02	3.45E-04	3.25E-03	0.00E+00	1.67E-02	0.00E+00
Photochemical ozone formation potential	kg NMVOC eq.	2.80E-02	3.22E-03	6.20E-03	8.82E-05	5.58E-04	0.00E+00	4.92E-03	0.00E+00
Abiotic depletion potential – minerals & metals*	kg Sb-eq.	1.56E-06	1.08E-08	5.63E-07	1.67E-10	1.25E-09	0.00E+00	8.29E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	8.83E+01	9.09E+00	1.93E+01	1.82E-01	1.36E+00	0.00E+00	1.76E+01	0.00E+00
Water Deprivation Potential*	m <sup>3</sup> world equiv.	7.99E-01	2.58E-02	1.42E-01	1.02E-04	7.58E-04	0.00E+00	-1.06E-02	0.00E+00

Resource use	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	MJ	2.15E+01	7.01E-01	3.89E+00	5.95E-04	6.30E-03	0.00E+00	2.15E+00	0.00E+00
Renewable primary energy resources as material utilization	MJ	4.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	2.58E+01	7.01E-01	3.89E+00	5.95E-04	6.30E-03	0.00E+00	2.15E+00	0.00E+00
Non-renewable primary energy as energy carrier	MJ	8.85E+01	9.09E+00	1.94E+01	1.82E-01	1.36E+00	0.00E+00	1.76E+01	0.00E+00
Non-renewable primary energy as material utilization	MJ	8.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	9.75E+01	9.09E+00	1.94E+01	1.82E-01	1.36E+00	0.00E+00	1.76E+01	0.00E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m <sup>3</sup>	5.32E-02	1.77E-03	1.00E-02	1.53E-06	1.14E-05	0.00E+00	1.82E-03	0.00E+00

\*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.



**GROUP 19: 1M<sup>2</sup> OF GIB® BARRIERLINE 25MM CONTD.**

		Production	Distribution	Installation	End-of-life				Benefits & loads
Waste categories and output flows	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.48E-07	1.89E-11	2.80E-08	1.97E-13	1.47E-12	0.00E+00	1.14E-09	0.00E+00
Non-hazardous waste disposed	kg	1.01E-01	2.34E-04	2.79E+00	2.60E-06	1.94E-05	0.00E+00	1.83E+01	0.00E+00
Radioactive waste disposed	kg	3.76E-04	1.98E-07	1.02E-04	2.67E-09	1.99E-08	0.00E+00	1.09E-04	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.43E-01	0.00E+00	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Biogenic carbon content - product	kg	2.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content - packaging	kg	4.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
IPCC AR5 GWP (excluding biogenic carbon)	kg CO <sub>2</sub> -eq.	6.47E+00	6.52E-01	1.66E+00	1.36E-02	9.66E-02	0.00E+00	2.68E+00	0.00E+00
Respiratory inorganics	Disease incidences	5.52E-07	1.92E-08	1.13E-07	7.37E-10	3.35E-09	0.00E+00	4.49E-08	0.00E+00
Ionizing radiation - human health**	kBq U235 eq.	4.88E-02	2.46E-05	1.32E-02	3.45E-07	2.57E-06	0.00E+00	1.08E-02	0.00E+00
Ecotoxicity freshwater*	CTUe	7.32E+01	3.85E+00	2.38E+01	4.57E-02	3.40E-01	0.00E+00	6.86E+01	0.00E+00
Human toxicity, cancer*	CTUh	1.96E-09	4.58E-11	5.17E-10	7.67E-13	5.77E-12	0.00E+00	6.93E-10	0.00E+00
Human toxicity, non-canc.*	CTUh	7.38E-08	2.26E-09	2.45E-08	4.79E-11	3.38E-10	0.00E+00	7.05E-08	0.00E+00
Land use*	Pt	6.41E+01	1.03E-01	1.27E+01	4.18E-04	3.11E-03	0.00E+00	9.26E-01	0.00E+00
Environmental impact – EN15804+A1	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential (total)	kg CO <sub>2</sub> -eq.	5.54E+00	6.78E-01	1.56E+00	1.35E-02	1.01E-01	0.00E+00	2.88E+00	0.00E+00
Depletion potential of the stratospheric ozone layer	kg CFC11-eq.	1.35E-11	9.03E-14	3.00E-12	1.28E-15	9.55E-15	0.00E+00	2.44E-12	0.00E+00
Acidification potential of land and water	kg SO <sub>2</sub> -eq.	2.90E-02	2.34E-03	6.22E-03	4.53E-05	4.02E-04	0.00E+00	4.05E-03	0.00E+00
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup> -eq.	3.56E-03	5.74E-04	8.00E-04	1.05E-05	9.97E-05	0.00E+00	7.12E-04	0.00E+00
Photochemical ozone creation potential	kg C <sub>2</sub> H <sub>4</sub> -eq.	2.04E-03	-9.96E-04	4.90E-04	4.47E-06	-1.78E-04	0.00E+00	6.30E-04	0.00E+00
Abiotic depletion potential – elements*	kg Sb-eq.	1.56E-06	1.08E-08	5.64E-07	1.67E-10	1.25E-09	0.00E+00	8.36E-08	0.00E+00
Abiotic depletion potential – fossil fuels*	MJ	8.63E+01	9.09E+00	1.89E+01	1.82E-01	1.35E+00	0.00E+00	1.72E+01	0.00E+00

\*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.

\*\*This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

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## VERSION HISTORY

V1.0: Expired EPD, initial release

V1.1: Expired EPD, updated release

V2.0: Current EPD, initial release. Update of the EPD to PCR v1.11 and current Winstone production process. Changes in results include a 6% reduction for GWP+A1 considering GIB Standard® 10 mm.

V2.1: Current EPD, updated release. Update in Table 1 with replacement of calculated board weight (kg/m<sup>2</sup>) to maximum board weight variation according to GIB published technical literature. This new table changes the weight per board between 8.0% (GIB Barrierline 25 mm) and 0.2% (GIB Ultraline 13mm). Other modifications include editorial changes in technical specifications of products.





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