



Environmental Product Declaration

In Accordance to ISO 14025 and EN 15804+A2
Declaration Number: 882/2025

Date of Issue: 01/12/2025
Valid Until: 01/12/2030

Gypsum Boards Technogips Pro:

- Plasterboard Technogips Pro Type A
- Plasterboard Technogips Pro Type H
- Plasterboard Technogips Pro Type H2
- Plasterboard Technogips Pro Type DF
- Plasterboard Technogips Pro Type DFH2
- Plasterboard Technogips Pro Type DFIR
- Plasterboard Technogips Pro Type DFH1R
- Gypsum Board Technogips Pro Type GM-H1
- Gypsum Board Technogips Pro Type GM-DFIR
- Gypsum Board Technogips Pro Type GM-DFH1R

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General Information



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Formatt Building Products Ltd. Gypsum Boards Technogips Pro

This declaration is the Type III Environmental Product Declaration (EPD) based on EN 15804+A2 and verified according to ISO 14025 by an external auditor. It contains information on the impact of the declared construction materials on the environment. Their aspects were verified by the independent body according to ISO 14025. Basically, a comparison or evaluation of EPD data is possible only if all the compared data were created according to EN 15804+A2.

EPD OWNER:	Formatt Building Products Ltd. 49B Bulgaria Blvd., 1404 Sofia, Bulgaria www.formatt.com ; sales@technogipspro.com + 359 2 805 1166
DECLARED UNIT:	1 m ² gypsum plasterboard with thickness 12.5 mm
LIFE CYCLE ANALYSIS (LCA) SCOPE:	A1-A3, C1-C4 and D modules in accordance with EN 15804+A2 (Cradle-to-Gate with options)
PCR:	ITB-PCR A
DECLARED DURABILITY:	50 years under normal conditions of use
PRODUCT STANDARD:	EN 520:2004 + A1:2009, EN 15283-1:2008
YEAR OF PREPARING THE CHARACTERISTIC:	2026

About the Company

Technogips Pro is the first Bulgarian brand specialized in production of gypsum plasterboards, dry gypsum mixtures and plasters. The mission of the company is to provide innovative building solutions for safe, healthy and comfortable living environment.

The latest generation technology is used in the manufacturing process, and the products satisfy all EU quality and safety requirements. Technogips Pro has 16 years of experience on the market and is present in over 24 countries. The factory of Technogips Pro is certified under ISO 14001:2004 and has a monitoring system for outgoing emissions. Other relevant certifications of the company are issued under ISO 9001:2015 Quality Management System and ISO 45001:2008 Occupational Health and Safety Management.

Product Description

Technogips Pro boards consist of an aerated gypsum core with special additives encased in and firmly bonded to strong FSC® certified paper or glass mat liner. The gypsum core contains various additives based on the product type and intended use. Technogips Pro boards come with the option of either tapered edge or square edge on the long edges and has short edges sawn straight.

Products certified under this EPD include the following products:

Plasterboard Technogips Pro Type A

Type A is intended for use in interior dry construction systems as partition walls, shaft walls, wall linings and suspended ceilings in areas with normal humidity.

Plasterboard Technogips Pro Type H1 / H2

Type H is intended for use in interior dry construction systems as partition walls, shaft walls, wall linings and suspended ceilings in areas with high levels of relative humidity for short periods of time, such as domestic kitchens, bathrooms, laundry rooms, etc.

Plasterboard Technogips Pro Type DF

Type DF is intended for use in interior dry construction systems like partition walls, shaft walls, wall linings and suspended ceilings in areas with higher requirements for fire protection such as evacuation corridors, stairways, industrial premises, etc.

Plasterboard Technogips Pro Type DFH2

Type DFH2 is intended for use in interior dry construction systems as partition walls, shaft walls, wall linings and suspended ceilings in areas with high levels of humidity for short periods of time and higher requirements for fire safety such as public kitchens, changing rooms, laboratories, etc.

Plasterboard Technogips Pro Type DFIR

Type DFIR is a board intended for use in interior premium quality dry construction systems such as partition walls, shaft walls, wall linings and suspended ceilings in areas with higher requirements for fire protection, sound insulation and high levels of robustness of mechanical impacts. The board is ideal for hotels, schools, hospitals, and other large-scale commercial projects.

Plasterboard Technogips Pro Type DFH1IR

Type DFH1IR is a high-performance board intended for use in interior premium quality dry construction systems as partition walls, shaft walls, wall linings and suspended ceilings in areas with higher requirements for fire protection, sound insulation, moisture resistance and high levels of robustness of mechanical impacts. The board is ideal for hotels, schools, hospitals, and other large commercial projects.

Gypsum Board Technogips Pro Type GM-H1

Type GM H1 is intended for use in premium dry construction systems with increased requirements for fire protection and moisture resistance.

Gypsum Board Technogips Pro Type GM-DFH1IR

Type GM DFH1IR is a high-performance board intended for use in premium quality dry construction of non-combustible facade systems (walls, claddings, eaves) and partition walls, shaft walls, wall linings in areas with higher requirements for fire protection, sound insulation, moisture resistance and high levels of robustness of mechanical impacts, such as public bathrooms, shower cabins, relax areas, SPA centers and premises with pools.

Gypsum Board Technogips Pro Type GM-DFIR

Type GM DFIR is intended for use in premium interior dry construction systems as partition walls, shaft walls, fire encasement of columns, wall linings and suspended ceilings in areas with higher requirements for fire protection, sound insulation and high levels of robustness of mechanical impacts such as evacuation corridors, stairways, industrial premises, etc.

Technical information

Essential characteristics of plasterboards are listed below as per the Declarations of Performance (DoPs).

	Type A	Type H1	Type H2	Type DF	Type DFH2	Type DFIR	Type DFH1IR	Type GM H1	Type GM DFIR	Type GMDFH1IR
Length, mm	2000-3000	2000-3000	2000-3000	2000-3000	2000-3000	2000-3000	2000-3000	2000-3000	2000-3000	2000-3000
Width, mm	600/1200/1250	1200	600 / 1200 / 1250	600/1200/1250	1200/1250	1200/1250	1200/1250	1200 / 1250	1200 / 1250	1200/1250
Thickness, mm	9.5/ 12.5/ 15/18	12.5	9.5 / 12.5 / 15 / 18	12.5/ 15/ 18	12.5/ 15	12.5/ 15	12.5	12.5	12.5 / 15	12.5 / 15
Surface mass, kg/m²	6.6 / 8.1 / 10 / 13	9.3	7.2 / 8.7 / 11 / 14	10 / 12 / 15	10.5 / 12.5	12 / 14.3	12.8	10	10.5 / 12.6	11.8
Flexural strength – F	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
Shear strength	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Reaction to fire – R2F	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A1	A1	A1
Thermal conductivity, W/mK	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Water vapour resistance, µ	10/4	10/4	10/4	10/4	10/4	10/4	10/4	10/4	10/4	10/4
Colour:	Ivory/ Grey	Green/Grey	Green/ Grey	Pink/ Grey	Green/ Grey	Yellow/ Grey	Purple/ Purple	White/ White	White/ White	Blue/ Blue
Sound insulation – R	Not applicable to the product itself. Declared according to its uses- data can be found on www.technogipspro.com									
Sound absorption – α										
Impact resistance - I										
Product standard:	EN 520:2004 + A1:2009									
	EN 15283-1:2008									

Raw materials

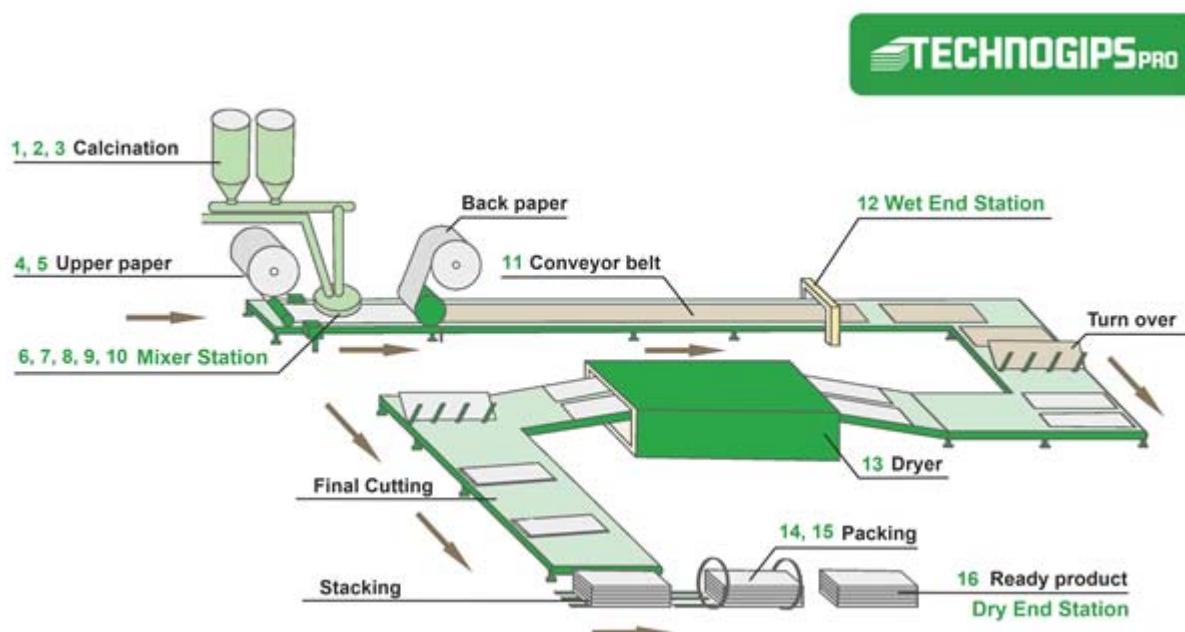
Technogips Pro boards covered by this EPD are made from:

- Gypsum, FGD and recycled: 89- 94%.
- FSC certified (100% recycled) paper or glass mat liner: up to 3-4%.
- Additives: 1-8%.

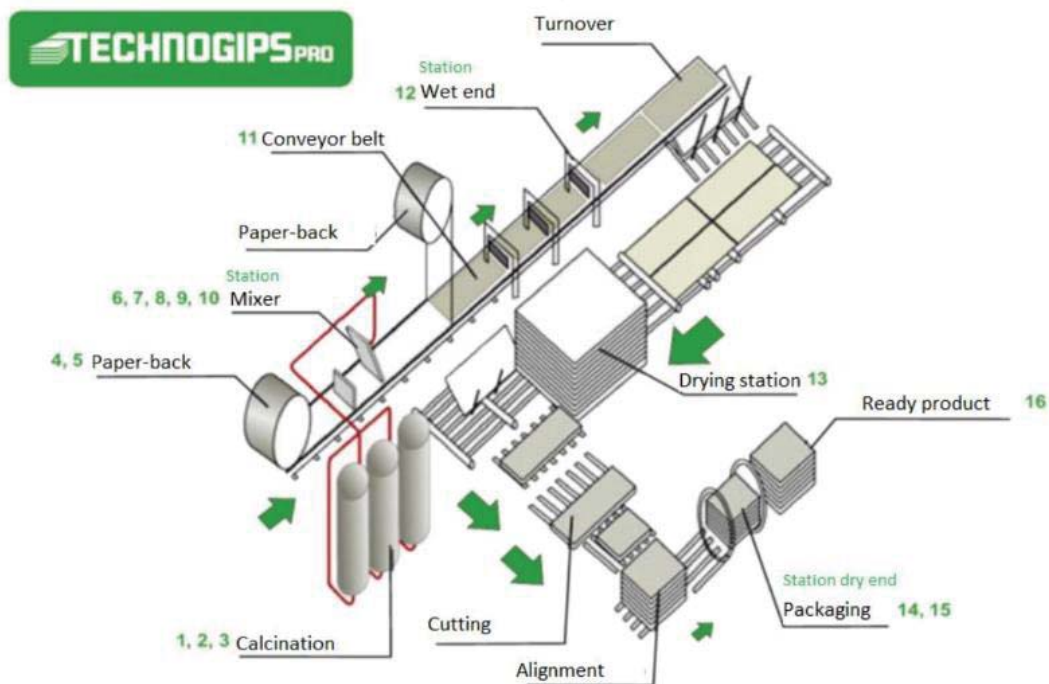
Manufacturing process

A gypsum slurry is made up from calcinated FGD gypsum hemi-hydrate (1), raw FGD gypsum (di-hydrate), water and other additives, in a continuous mixer (3). The rolled face cardboard liner (2) is supplied to the conveyor line (5). This slurry is spread in a uniform stream, from multiple outlet hoses onto a moving rolled face cardboard liner.

The cardboard liner is also incised so that it can be easily folded at the edges. The back cardboard liner roll (4) is then layered from above and applied to the slurry. The front face cardboard liner is folded at the edges, and the gypsum slurry is fully enclosed in cardboard liner. After that, the board is moved along the length of the production line on a series of setting belts, and sections of rollers (5). During this time the setting and hardening processes of the core of the plasterboard occur. This newly formed di-hydrate has better mechanical properties (strength and stiffness). As another result of this reaction the bond between the cardboard liner and the gypsum core is established by the growth of the gypsum crystals into the fibrous pores of the cardboard liner. Also, at this stage some relevant information about the plasterboard is printed. The gypsum has hardened enough before reaching the shear station.



The plasterboard is cut into boards with specific length. The boards are then turned over (7) and processed to a multi-level dryer (8). At the end of the drying process the plasterboard has less than 0.2% moisture content. After the drying process is finished, the boards are trimmed (9) and aligned onto pallets (10). The pallets are covered with plastic foil (11) and are placed for storage in the warehouse, or they are sent for direct distribution (12).



Environment and health during manufacturing

With respect to health protection during the manufacturing process, the Technogips Pro factory follows and respects the Health and Safety Regulation. The manufacturing process is certified under ISO 45001:2018. Plasterboards are manufactured in a factory permitted by emission law and by external waste recovery in accordance with the Bulgarian regulations. The management system operated by the site is according to the standard ISO 14001:2015. Production waste is internally recycled.

Storage and maintenance

Packaging

Technogips Pro boards are stacked, stored, transported, and delivered to the market on pallets protected against damage by strapping tape (polyethylene). Packing materials are externally recovered/disposed of.

Product processing/Installation

Store in internal areas, in dry conditions and on firm ground levels. The products are processed in accordance with the technical guidelines issued by Technogips Pro and available on www.formatt.com.

Condition of use

Technogips Pro boards are suitable for any type of coating (facade plasters for type GMDFH1IR and gypsum-based skim coats, wallpaper, paint, tiles for the rest of the types). No maintenance or repair is required throughout their service life. The material composition of the product does not change during its use phase. All Technogips Pro boards must not be continuously exposed to excessive high humidity in non-ventilated areas.

Mechanical destruction

Mechanical damage can be repaired using jointing compound, due to the easy repair associated with plasterboards and without any adverse effects on function. Plasterboards can be easily replaced with new boards in the event of more extensive damage. Besides the need for repair, the destruction will not have any significant environmental impact.

Re-use phase

Once Technogips Pro boards are installed, they are not suited for re-use in an unchanged way. Prior to collection, plasterboards Technogips Pro boards should be separated from other used building materials.

Further use

Gypsum plasterboards which are as good as new (e.g. cuttings) can be used after crushing and possibly separating the cardboard and coatings in agreement with the customer as recultivation material in mining areas, for recovery on landfills, as soil conditioner, fertilizer components or acceleration agents for cement, considering any official specifications.

Disposal

Technogips Pro boards must be disposed of in compliance with the following waste codes of the European Waste Catalogue /EWC/: 17 08 02 gypsum-based construction materials.

Further information

Additional information is available at www.formatt.com

System boundaries

Product stage: modules A1-A3

Module A1 describes the acquisition of raw materials and manufacturing of pre-products. Gypsum from flue-gas desulphurization process (FGD gypsum) is the substance that builds the core of the plasterboard. The raw FGD gypsum is considered in this study as a recycling material without environmental burden. The production processes of the other pre-products used (cardboard and additives) are considered using referent data for the Ecoinvent v.3.11 database. Production of packaging materials is considered using reference data from Ecoinvent v.3.11.

Module A2 refers to the transport of the gypsum within the Technogips Pro factory, transport of the cardboard and other components of the slurry to the Technogips Pro factory and is considered using real data from the manufacturer.

Module A3 takes into account the actual production process. Energy, water and fuel consumption are considered in full based on 1-year consumption data provided by the manufacturer.

Transport to consumer and Installation: modules A4 and A5

Transport of solid reinforced concrete road slabs from the manufacturing plant to the construction site is carried out using specialized trucks. A transport distance of 100 km is considered (emission standard: Euro 5) with 100% load capacity. The installation energy (handling, fastening) is likely very low, approx. 5 kWh/ton of product.

End-of-life stage: modules C1-C4

Module C1 describes processing of plasterboards during its deconstruction as part of the deconstruction/demolition process of the entire building. The quantity (per mass) of the plasterboards varies between only 0,5% and 2,0% of the total generated demolition waste of a building and the efforts for their deconstruction, compared to the demolition of the entire building can be neglected. Thus, the impact of this module is assumed as zero.

Module C2 refers to the transport of the plasterboards C&D waste to a facility for waste treatment. The plasterboard waste from demolition activities is transported to a special facility – a dedicated landfill, where the gypsum containing waste can be disposed separately or to a C&DW storage site. The following assumptions are made to calculate the impact of this module:

- The average distance of transportation is 25 km.
- The transport of waste is by a lorry of the size 7.5-16 tons, Euro V emissions class.

Module C3 accounts the environmental impacts during the processing of plasterboards C&D waste at the waste recovery facility. In Bulgaria there is no recycling of plasterboards from demolition/repair works. The reuse of plasterboards is not regulated, so no recovery of plasterboards is done at the present time.

Module C4 considers the effects from gypsum plasters containing C&D waste that is disposed of. At the landfill, the waste is unloaded from the lorry at a dedicated place. No additional treatment is required.

Module D

Module D considers the effects and impact of the secondary material derived from the

recovery of plasterboard demolition waste. Since at the present time in Bulgaria there are no practices for demolition plasterboard waste recovery at all, plasterboard at the end of its service life cannot be linked to other systems using gypsum. The impacts for module D are assumed to be zero.

LCA Information

DECLARED UNIT	The declaration refers to declared unit (DU) – 1 m ² gypsum plasterboard with thickness 12.5 mm
SYSTEM BOUNDARY	The life cycle analysis of the declared products covers “Product Stage” A1-A3, C1-C4+D modules in accordance with EN 15804+A2 and ITB PCR A v1.6. (cradle to gate with options). Energy and water consumption, emissions as well as information on generated waste were inventoried and were included in the calculation. It can be assumed that the total sum of omitted processes does not exceed 2% of all impact categories. In accordance with EN 15804+A2, machines and facilities (capital goods) required for the production as well as transportation of employees were not included in LCA.
SYSTEM LIMITS	As per EN 15804+A2, in the case that there is not enough information, the process energy and materials representing less than 1% of the energy and mass used per module can be excluded (if they do not cause significant impacts). The addition of all the inputs and outputs excluded is less than 5% of the whole mass and energy used, as well as the emissions to environment occurred. Flows related to human activities such as employee transport are excluded. In accordance with EN 15804+A2 the construction of plants, production of machines and transportation systems are excluded. Environmental burden of the administrative building is partly considered. Some additives in very small amounts (less than 0.3 %) are excluded due to lack of enough data and negligible potential environmental impacts. The total sum of omitted processes does not exceed 1% of the whole mass of inputs and outputs.
ASSUMPTIONS AND LIMITATIONS	Generic data from Ecoinvent v.3.11 database is used to model the gypsum plasterboards components that are delivered by external suppliers and the manufacturer does not have influence on their production processes. Packaging materials and packaging waste are considered in the assessment of all components of the plasterboards.
DATA QUALITY	The information on the production process of the plasters, transport and composition of components is collected from Formatt Building Products EOOD. Information on the production process of additives is accounted as presented in Ecoinvent v.3.11 database. No mass balance approach used. Electricity is residual mix for Bulgaria (ecoinvent v 3.11).

ALLOCATION	The factory of Formatt Building Products Ltd. (Technogips Pro factory) in Kovachevo village, Radnevo municipality, Stara Zagora district produces various gypsum construction products for external and internal finishing layers of buildings. The manufacturing processes of all gypsum plasterboards are equivalent with slight variance in terms of working regime of drying and mixing stations. Even though, allocation by mass is done regarding energy and fuel use, and generated waste. Environmental impacts, resource use and waste generation are calculated based on yearly data about the inputs/outputs and the yearly production of gypsum plasterboards for 2024-2025.
GEOGRAPHICAL COVERAGE AND TIME PERIOD	All data related to the gypsum plasterboards is collected from Formatt Building Products Ltd. and represents the manufacturing process in 2024-2025. Assessment of transport of all components covers all used transport types, external and internal transport activities.

LCA results

Declared unit

The declaration refers to declared unit (DU) – 1 m² gypsum plasterboard with thickness 12.5 mm. The following life cycle modules were included in the analysis. The evaluation results for the specific products are given in tables.

System boundaries for the environmental characteristics of gypsum plasterboard production process by Formatt Building Products Ltd.

Environmental assessment information (MD – Module Declared, MND – Module Not Declared, INA – Indicator Not Assessed)																
Product stage			Construction process		Use stage							End of life				Benefits and loads beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction - installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MD	MD	MD	MD	MD

LCA results for Plasterboard Technogips Pro Type A

Environmental impacts for 1 m ² gypsum plasterboard type A, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	3.41E-01	9.72E-02	2.85E-01	0.00E+00	3.86E-02	0.00E+00	8.62E-02	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	3.61E-01	9.71E-02	2.85E-01	0.00E+00	3.85E-02	0.00E+00	8.52E-02	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-4.14E-02	6.20E-05	3.47E-04	0.00E+00	2.46E-05	0.00E+00	8.60E-04	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	2.19E-02	3.22E-05	4.91E-05	0.00E+00	1.28E-05	0.00E+00	8.64E-05	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	8.15E-06	2.12E-09	3.04E-09	0.00E+00	8.39E-10	0.00E+00	2.59E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	2.66E-03	3.13E-04	1.74E-03	0.00E+00	1.24E-04	0.00E+00	7.19E-04	0.00E+00
Eutrophication potential - freshwater	eq. kg P	9.90E-05	6.63E-06	1.40E-04	0.00E+00	2.63E-06	0.00E+00	2.48E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	9.02E-04	1.05E-04	3.26E-04	0.00E+00	4.16E-05	0.00E+00	2.48E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	7.63E-03	1.14E-03	3.26E-03	0.00E+00	4.53E-04	0.00E+00	2.70E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.03E-03	4.74E-04	8.96E-04	0.00E+00	1.88E-04	0.00E+00	7.81E-04	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.01E-04	3.35E-07	3.13E-07	0.00E+00	1.33E-07	0.00E+00	2.89E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	5.27E+00	1.38E+00	5.89E+00	0.00E+00	5.46E-01	0.00E+00	1.97E+00	0.00E+00
Water deprivation potential	eq. m ³	1.74E-01	7.21E-03	4.98E-02	0.00E+00	2.86E-03	0.00E+00	1.14E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type A, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eq. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type A, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	3.59E-01	2.24E-02	2.47E-01	0.00E+00	8.89E-03	0.00E+00	3.46E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	2.83E-01	0.00E+00	3.89E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	6.42E-01	2.24E-02	2.47E-01	0.00E+00	8.89E-03	0.00E+00	3.46E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	4.91E+00	1.38E+00	5.89E+00	0.00E+00	5.46E-01	0.00E+00	1.97E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	5.38E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	5.45E+00	1.38E+00	5.89E+00	0.00E+00	5.46E-01	0.00E+00	1.97E+00	0.00E+00
Consumption of secondary materials	kg	7.78E+00	6.15E-04	8.15E-04	0.00E+00	2.44E-04	0.00E+00	8.10E+00	0.00E+00
Consumption of renewable secondary fuels	MJ	2.12E-05	8.07E-06	2.61E-06	0.00E+00	3.20E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	9.41E-03	1.66E-04	1.13E-03	0.00E+00	6.60E-05	0.00E+00	3.07E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type A, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste. neutralized	kg	3.15E-02	1.97E-03	3.47E-02	0.00E+00	7.82E-04	0.00E+00	3.10E-06	0.00E+00
Non-hazardous waste neutralised	kg	7.49E-01	4.23E-02	6.86E-01	0.00E+00	1.68E-02	0.00E+00	8.12E+00	0.00E+00
Radioactive waste	kg	7.05E-06	4.05E-07	2.90E-05	0.00E+00	1.61E-07	0.00E+00	1.20E-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	2.07E-04	1.65E-05	5.89E-03	0.00E+00	6.54E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	3.60E-07	8.74E-08	9.10E-08	0.00E+00	3.47E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	6.52E-03	6.02E-04	1.09E-02	0.00E+00	2.39E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type H1

Environmental impacts for 1 m ² gypsum plasterboard type H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	3.92E-01	1.12E-01	3.27E-01	0.00E+00	4.43E-02	0.00E+00	9.89E-02	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	4.14E-01	1.11E-01	3.27E-01	0.00E+00	4.42E-02	0.00E+00	9.79E-02	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-4.76E-02	7.12E-05	3.98E-04	0.00E+00	2.83E-05	0.00E+00	9.88E-04	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	2.52E-02	3.70E-05	5.64E-05	0.00E+00	1.47E-05	0.00E+00	9.92E-05	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	9.36E-06	2.43E-09	3.49E-09	0.00E+00	9.64E-10	0.00E+00	2.98E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	3.05E-03	3.59E-04	2.00E-03	0.00E+00	1.42E-04	0.00E+00	8.26E-04	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.14E-04	7.61E-06	1.60E-04	0.00E+00	3.02E-06	0.00E+00	2.84E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.04E-03	1.21E-04	3.74E-04	0.00E+00	4.78E-05	0.00E+00	2.85E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	8.76E-03	1.31E-03	3.75E-03	0.00E+00	5.20E-04	0.00E+00	3.10E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.34E-03	5.44E-04	1.03E-03	0.00E+00	2.15E-04	0.00E+00	8.97E-04	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.46E-04	3.84E-07	3.59E-07	0.00E+00	1.52E-07	0.00E+00	3.31E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	6.06E+00	1.58E+00	6.77E+00	0.00E+00	6.27E-01	0.00E+00	2.26E+00	0.00E+00
Water deprivation potential	eq. m ³	1.99E-01	8.28E-03	5.71E-02	0.00E+00	3.29E-03	0.00E+00	1.31E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eq. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	4.12E-01	2.57E-02	2.84E-01	0.00E+00	1.02E-02	0.00E+00	3.97E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	3.25E-01	0.00E+00	4.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	7.37E-01	2.57E-02	2.84E-01	0.00E+00	1.02E-02	0.00E+00	3.97E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	5.64E+00	1.58E+00	6.77E+00	0.00E+00	6.27E-01	0.00E+00	2.26E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	6.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	6.26E+00	1.58E+00	6.77E+00	0.00E+00	6.27E-01	0.00E+00	2.26E+00	0.00E+00
Consumption of secondary materials	kg	8.93E+00	7.06E-04	9.35E-04	0.00E+00	2.80E-04	0.00E+00	9.30E+00	0.00E+00
Consumption of renewable secondary fuels	MJ	2.43E-05	9.27E-06	3.00E-06	0.00E+00	3.68E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.08E-02	1.91E-04	1.30E-03	0.00E+00	7.58E-05	0.00E+00	3.53E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste. neutralized	kg	3.61E-02	2.26E-03	3.98E-02	0.00E+00	8.98E-04	0.00E+00	3.56E-06	0.00E+00
Non-hazardous waste neutralised	kg	8.60E-01	4.86E-02	7.87E-01	0.00E+00	1.93E-02	0.00E+00	9.32E+00	0.00E+00
Radioactive waste	kg	8.10E-06	4.65E-07	3.33E-05	0.00E+00	1.84E-07	0.00E+00	1.38E-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	2.38E-04	1.90E-05	6.76E-03	0.00E+00	7.50E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	4.13E-07	1.00E-07	1.04E-07	0.00E+00	3.98E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	7.49E-03	6.91E-04	1.25E-02	0.00E+00	2.74E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type H2

Environmental impacts for 1 m ² gypsum plasterboard type H2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	3.67E-01	1.04E-01	3.06E-01	0.00E+00	4.14E-02	0.00E+00	9.26E-02	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	3.88E-01	1.04E-01	3.06E-01	0.00E+00	4.14E-02	0.00E+00	9.16E-02	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-4.45E-02	6.66E-05	3.72E-04	0.00E+00	2.64E-05	0.00E+00	9.24E-04	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	2.35E-02	3.46E-05	5.28E-05	0.00E+00	1.37E-05	0.00E+00	9.28E-05	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	8.75E-06	2.27E-09	3.27E-09	0.00E+00	9.02E-10	0.00E+00	2.79E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	2.85E-03	3.36E-04	1.87E-03	0.00E+00	1.33E-04	0.00E+00	7.73E-04	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.06E-04	7.12E-06	1.50E-04	0.00E+00	2.82E-06	0.00E+00	2.66E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	9.68E-04	1.13E-04	3.50E-04	0.00E+00	4.47E-05	0.00E+00	2.67E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	8.20E-03	1.23E-03	3.50E-03	0.00E+00	4.86E-04	0.00E+00	2.90E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.19E-03	5.09E-04	9.62E-04	0.00E+00	2.01E-04	0.00E+00	8.39E-04	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.24E-04	3.59E-07	3.36E-07	0.00E+00	1.43E-07	0.00E+00	3.10E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	5.67E+00	1.48E+00	6.33E+00	0.00E+00	5.87E-01	0.00E+00	2.12E+00	0.00E+00
Water deprivation potential	eq. m ³	1.86E-01	7.75E-03	5.34E-02	0.00E+00	3.07E-03	0.00E+00	1.23E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type H2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eq. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type H2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	3.85E-01	2.41E-02	2.66E-01	0.00E+00	9.55E-03	0.00E+00	3.72E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	3.04E-01	0.00E+00	4.18E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	6.89E-01	2.41E-02	2.66E-01	0.00E+00	9.55E-03	0.00E+00	3.72E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	5.28E+00	1.48E+00	6.33E+00	0.00E+00	5.87E-01	0.00E+00	2.11E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	5.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	5.85E+00	1.48E+00	6.33E+00	0.00E+00	5.87E-01	0.00E+00	2.11E+00	0.00E+00
Consumption of secondary materials	kg	8.35E+00	6.61E-04	8.75E-04	0.00E+00	2.62E-04	0.00E+00	8.70E+00	0.00E+00
Consumption of renewable secondary fuels	MJ	2.27E-05	8.67E-06	2.81E-06	0.00E+00	3.44E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.01E-02	1.79E-04	1.21E-03	0.00E+00	7.09E-05	0.00E+00	3.30E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type H2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste. neutralized	kg	3.38E-02	2.12E-03	3.72E-02	0.00E+00	8.40E-04	0.00E+00	3.33E-06	0.00E+00
Non-hazardous waste neutralised	kg	8.05E-01	4.54E-02	7.37E-01	0.00E+00	1.80E-02	0.00E+00	8.72E+00	0.00E+00
Radioactive waste	kg	7.58E-06	4.35E-07	3.12E-05	0.00E+00	1.73E-07	0.00E+00	1.29E-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-04	1.78E-05	6.32E-03	0.00E+00	7.02E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	3.86E-07	9.38E-08	9.77E-08	0.00E+00	3.72E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	7.01E-03	6.47E-04	1.17E-02	0.00E+00	2.57E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type DF

Environmental impacts for 1 m ² gypsum plasterboard type DF, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	4.22E-01	1.20E-01	3.52E-01	0.00E+00	4.76E-02	0.00E+00	1.06E-01	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	4.46E-01	1.20E-01	3.51E-01	0.00E+00	4.76E-02	0.00E+00	1.05E-01	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-5.11E-02	7.66E-05	4.28E-04	0.00E+00	3.04E-05	0.00E+00	1.06E-03	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	2.70E-02	3.98E-05	6.07E-05	0.00E+00	1.58E-05	0.00E+00	1.07E-04	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	1.01E-05	2.61E-09	3.75E-09	0.00E+00	1.04E-09	0.00E+00	3.20E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	3.28E-03	3.86E-04	2.15E-03	0.00E+00	1.53E-04	0.00E+00	8.88E-04	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.22E-04	8.18E-06	1.72E-04	0.00E+00	3.25E-06	0.00E+00	3.06E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.11E-03	1.30E-04	4.02E-04	0.00E+00	5.14E-05	0.00E+00	3.06E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	9.42E-03	1.41E-03	4.03E-03	0.00E+00	5.59E-04	0.00E+00	3.33E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.51E-03	5.85E-04	1.11E-03	0.00E+00	2.32E-04	0.00E+00	9.64E-04	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.72E-04	4.13E-07	3.86E-07	0.00E+00	1.64E-07	0.00E+00	3.56E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	6.51E+00	1.70E+00	7.27E+00	0.00E+00	6.74E-01	0.00E+00	2.43E+00	0.00E+00
Water deprivation potential	eq. m ³	2.14E-01	8.91E-03	6.14E-02	0.00E+00	3.53E-03	0.00E+00	1.41E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type DF, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eq. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type DF, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	4.43E-01	2.77E-02	3.05E-01	0.00E+00	1.10E-02	0.00E+00	4.27E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	3.49E-01	0.00E+00	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	7.92E-01	2.77E-02	3.05E-01	0.00E+00	1.10E-02	0.00E+00	4.27E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	6.06E+00	1.70E+00	7.27E+00	0.00E+00	6.74E-01	0.00E+00	2.43E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	6.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	6.73E+00	1.70E+00	7.27E+00	0.00E+00	6.74E-01	0.00E+00	2.43E+00	0.00E+00
Consumption of secondary materials	kg	9.60E+00	7.60E-04	1.01E-03	0.00E+00	3.01E-04	0.00E+00	1.00E+01	0.00E+00
Consumption of renewable secondary fuels	MJ	2.61E-05	9.96E-06	3.23E-06	0.00E+00	3.95E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.16E-02	2.05E-04	1.40E-03	0.00E+00	8.15E-05	0.00E+00	3.79E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type DF, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste. neutralized	kg	3.89E-02	2.44E-03	4.28E-02	0.00E+00	9.66E-04	0.00E+00	3.83E-06	0.00E+00
Non-hazardous waste neutralised	kg	9.25E-01	5.22E-02	8.47E-01	0.00E+00	2.07E-02	0.00E+00	1.00E+01	0.00E+00
Radioactive waste	kg	8.71E-06	5.00E-07	3.58E-05	0.00E+00	1.98E-07	0.00E+00	1.48E-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	2.56E-04	2.04E-05	7.27E-03	0.00E+00	8.07E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	4.44E-07	1.08E-07	1.12E-07	0.00E+00	4.28E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	8.05E-03	7.43E-04	1.34E-02	0.00E+00	2.95E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type DFH2

Environmental impacts for 1 m ² gypsum plasterboard type DFH2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	4.43E-01	1.26E-01	3.69E-01	0.00E+00	5.00E-02	0.00E+00	1.12E-01	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	4.68E-01	1.26E-01	3.69E-01	0.00E+00	4.99E-02	0.00E+00	1.10E-01	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-5.37E-02	8.04E-05	4.49E-04	0.00E+00	3.19E-05	0.00E+00	1.12E-03	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	2.84E-02	4.18E-05	6.37E-05	0.00E+00	1.66E-05	0.00E+00	1.12E-04	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	1.06E-05	2.74E-09	3.94E-09	0.00E+00	1.09E-09	0.00E+00	3.36E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	3.44E-03	4.06E-04	2.26E-03	0.00E+00	1.60E-04	0.00E+00	9.33E-04	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.28E-04	8.59E-06	1.81E-04	0.00E+00	3.41E-06	0.00E+00	3.21E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.17E-03	1.36E-04	4.22E-04	0.00E+00	5.40E-05	0.00E+00	3.22E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	9.89E-03	1.48E-03	4.23E-03	0.00E+00	5.87E-04	0.00E+00	3.50E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.64E-03	6.14E-04	1.16E-03	0.00E+00	2.43E-04	0.00E+00	1.01E-03	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.91E-04	4.34E-07	4.06E-07	0.00E+00	1.72E-07	0.00E+00	3.74E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	6.84E+00	1.79E+00	7.64E+00	0.00E+00	7.08E-01	0.00E+00	2.55E+00	0.00E+00
Water deprivation potential	eq. m ³	2.25E-01	9.35E-03	6.45E-02	0.00E+00	3.71E-03	0.00E+00	1.48E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type DFH2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eq. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type DFH2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	4.65E-01	2.90E-02	3.21E-01	0.00E+00	1.15E-02	0.00E+00	4.48E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	3.67E-01	0.00E+00	5.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	8.32E-01	2.90E-02	3.21E-01	0.00E+00	1.15E-02	0.00E+00	4.48E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	6.37E+00	1.79E+00	7.64E+00	0.00E+00	7.08E-01	0.00E+00	2.55E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	6.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	7.06E+00	1.79E+00	7.64E+00	0.00E+00	7.08E-01	0.00E+00	2.55E+00	0.00E+00
Consumption of secondary materials	kg	1.01E+01	7.98E-04	1.06E-03	0.00E+00	3.16E-04	0.00E+00	1.05E+01	0.00E+00
Consumption of renewable secondary fuels	MJ	2.74E-05	1.05E-05	3.39E-06	0.00E+00	4.15E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.22E-02	2.16E-04	1.47E-03	0.00E+00	8.56E-05	0.00E+00	3.98E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type DFH2, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste. neutralized	kg	4.08E-02	2.56E-03	4.49E-02	0.00E+00	1.01E-03	0.00E+00	4.02E-06	0.00E+00
Non-hazardous waste neutralised	kg	9.71E-01	5.48E-02	8.89E-01	0.00E+00	2.18E-02	0.00E+00	1.05E+01	0.00E+00
Radioactive waste	kg	9.14E-06	5.25E-07	3.76E-05	0.00E+00	2.08E-07	0.00E+00	1.55E-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	2.69E-04	2.14E-05	7.63E-03	0.00E+00	8.47E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	4.66E-07	1.13E-07	1.18E-07	0.00E+00	4.49E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	8.46E-03	7.81E-04	1.41E-02	0.00E+00	3.10E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type DFIR

Environmental impacts for 1 m ² gypsum plasterboard type DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	5.06E-01	1.44E-01	4.22E-01	0.00E+00	5.71E-02	0.00E+00	1.28E-01	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	5.35E-01	1.44E-01	4.21E-01	0.00E+00	5.71E-02	0.00E+00	1.26E-01	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-6.14E-02	9.19E-05	5.14E-04	0.00E+00	3.65E-05	0.00E+00	1.27E-03	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	3.25E-02	4.78E-05	7.28E-05	0.00E+00	1.89E-05	0.00E+00	1.28E-04	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	1.21E-05	3.13E-09	4.50E-09	0.00E+00	1.24E-09	0.00E+00	3.84E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	3.94E-03	4.64E-04	2.58E-03	0.00E+00	1.83E-04	0.00E+00	1.07E-03	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.47E-04	9.82E-06	2.07E-04	0.00E+00	3.90E-06	0.00E+00	3.67E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.34E-03	1.56E-04	4.83E-04	0.00E+00	6.17E-05	0.00E+00	3.68E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	1.13E-02	1.70E-03	4.83E-03	0.00E+00	6.71E-04	0.00E+00	4.00E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	3.01E-03	7.02E-04	1.33E-03	0.00E+00	2.78E-04	0.00E+00	1.16E-03	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	4.46E-04	4.96E-07	4.64E-07	0.00E+00	1.97E-07	0.00E+00	4.28E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	7.81E+00	2.04E+00	8.73E+00	0.00E+00	8.09E-01	0.00E+00	2.92E+00	0.00E+00
Water deprivation potential	eq. m ³	2.57E-01	1.07E-02	7.37E-02	0.00E+00	4.24E-03	0.00E+00	1.69E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	5.31E-01	3.32E-02	3.66E-01	0.00E+00	1.32E-02	0.00E+00	5.12E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	4.19E-01	0.00E+00	5.77E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	9.50E-01	3.32E-02	3.66E-01	0.00E+00	1.32E-02	0.00E+00	5.12E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	7.28E+00	2.04E+00	8.73E+00	0.00E+00	8.09E-01	0.00E+00	2.92E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	7.97E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	8.07E+00	2.04E+00	8.73E+00	0.00E+00	8.09E-01	0.00E+00	2.92E+00	0.00E+00
Consumption of secondary materials	kg	1.15E+01	9.12E-04	1.21E-03	0.00E+00	3.62E-04	0.00E+00	1.20E+01	0.00E+00
Consumption of renewable secondary fuels	MJ	3.14E-05	1.20E-05	3.87E-06	0.00E+00	4.74E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.39E-02	2.47E-04	1.68E-03	0.00E+00	9.78E-05	0.00E+00	4.55E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste, neutralized	kg	4.66E-02	2.92E-03	5.13E-02	0.00E+00	1.16E-03	0.00E+00	4.59E-06	0.00E+00
Non-hazardous waste neutralised	kg	1.11E+00	6.27E-02	1.02E+00	0.00E+00	2.49E-02	0.00E+00	1.20E+01	0.00E+00
Radioactive waste	kg	1.04E-05	6.00E-07	4.30E-05	0.00E+00	2.38E-07	0.00E+00	1.77E-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	3.07E-04	2.45E-05	8.72E-03	0.00E+00	9.68E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	5.33E-07	1.29E-07	1.35E-07	0.00E+00	5.14E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	9.66E-03	8.92E-04	1.61E-02	0.00E+00	3.54E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type DFH1IR

Environmental impacts for 1 m ² gypsum plasterboard type DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	5.40E-01	1.54E-01	4.50E-01	0.00E+00	6.09E-02	0.00E+00	1.36E-01	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	5.70E-01	1.53E-01	4.50E-01	0.00E+00	6.09E-02	0.00E+00	1.35E-01	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-6.55E-02	9.80E-05	5.48E-04	0.00E+00	3.89E-05	0.00E+00	1.36E-03	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	3.46E-02	5.09E-05	7.76E-05	0.00E+00	2.02E-05	0.00E+00	1.37E-04	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	1.29E-05	3.34E-09	4.80E-09	0.00E+00	1.33E-09	0.00E+00	4.10E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	4.20E-03	4.95E-04	2.75E-03	0.00E+00	1.95E-04	0.00E+00	1.14E-03	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.57E-04	1.05E-05	2.21E-04	0.00E+00	4.16E-06	0.00E+00	3.91E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.42E-03	1.66E-04	5.15E-04	0.00E+00	6.58E-05	0.00E+00	3.92E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	1.21E-02	1.81E-03	5.16E-03	0.00E+00	7.16E-04	0.00E+00	4.26E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	3.21E-03	7.48E-04	1.42E-03	0.00E+00	2.96E-04	0.00E+00	1.23E-03	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	4.76E-04	5.29E-07	4.94E-07	0.00E+00	2.10E-07	0.00E+00	4.56E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	8.33E+00	2.18E+00	9.31E+00	0.00E+00	8.63E-01	0.00E+00	3.11E+00	0.00E+00
Water deprivation potential	eq. m ³	2.74E-01	1.14E-02	7.86E-02	0.00E+00	4.52E-03	0.00E+00	1.81E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	5.67E-01	3.54E-02	3.91E-01	0.00E+00	1.40E-02	0.00E+00	5.47E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	4.47E-01	0.00E+00	6.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	1.01E+00	3.54E-02	3.91E-01	0.00E+00	1.40E-02	0.00E+00	5.47E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	7.76E+00	2.18E+00	9.31E+00	0.00E+00	8.63E-01	0.00E+00	3.11E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	8.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	8.61E+00	2.18E+00	9.31E+00	0.00E+00	8.63E-01	0.00E+00	3.11E+00	0.00E+00
Consumption of secondary materials	kg	1.23E+01	9.72E-04	1.29E-03	0.00E+00	3.86E-04	0.00E+00	1.28E+01	0.00E+00
Consumption of renewable secondary fuels	MJ	3.34E-05	1.28E-05	4.13E-06	0.00E+00	5.06E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.49E-02	2.63E-04	1.79E-03	0.00E+00	1.04E-04	0.00E+00	4.86E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste, neutralized	kg	4.98E-02	3.12E-03	5.48E-02	0.00E+00	1.24E-03	0.00E+00	4.90E-06	0.00E+00
Non-hazardous waste neutralised	kg	1.18E+00	6.69E-02	1.08E+00	0.00E+00	2.65E-02	0.00E+00	1.28E+01	0.00E+00
Radioactive waste	kg	1.11E-05	6.40E-07	4.58E-05	0.00E+00	2.54E-07	0.00E+00	1.89E-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	3.27E-04	2.61E-05	9.30E-03	0.00E+00	1.03E-05	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	5.68E-07	1.38E-07	1.44E-07	0.00E+00	5.48E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	1.03E-02	9.52E-04	1.72E-02	0.00E+00	3.78E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type GM-H1

Environmental impacts for 1 m ² gypsum plasterboard type GM-H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	4.22E-01	1.20E-01	3.52E-01	0.00E+00	4.76E-02	0.00E+00	1.06E-01	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	4.46E-01	1.20E-01	3.51E-01	0.00E+00	4.76E-02	0.00E+00	1.05E-01	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-5.11E-02	7.66E-05	4.28E-04	0.00E+00	3.04E-05	0.00E+00	1.06E-03	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	2.70E-02	3.98E-05	6.07E-05	0.00E+00	1.58E-05	0.00E+00	1.07E-04	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	1.01E-05	2.61E-09	3.75E-09	0.00E+00	1.04E-09	0.00E+00	3.20E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	3.28E-03	3.86E-04	2.15E-03	0.00E+00	1.53E-04	0.00E+00	8.88E-04	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.22E-04	8.18E-06	1.72E-04	0.00E+00	3.25E-06	0.00E+00	3.06E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.11E-03	1.30E-04	4.02E-04	0.00E+00	5.14E-05	0.00E+00	3.06E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	9.42E-03	1.41E-03	4.03E-03	0.00E+00	5.59E-04	0.00E+00	3.33E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.51E-03	5.85E-04	1.11E-03	0.00E+00	2.32E-04	0.00E+00	9.64E-04	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.72E-04	4.13E-07	3.86E-07	0.00E+00	1.64E-07	0.00E+00	3.56E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	6.51E+00	1.70E+00	7.27E+00	0.00E+00	6.74E-01	0.00E+00	2.43E+00	0.00E+00
Water deprivation potential	eq. m ³	2.14E-01	8.91E-03	6.14E-02	0.00E+00	3.53E-03	0.00E+00	1.41E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type GM-H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type GM-H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	4.43E-01	2.77E-02	3.05E-01	0.00E+00	1.10E-02	0.00E+00	4.27E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	3.49E-01	0.00E+00	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	7.92E-01	2.77E-02	3.05E-01	0.00E+00	1.10E-02	0.00E+00	4.27E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	6.06E+00	1.70E+00	7.27E+00	0.00E+00	6.74E-01	0.00E+00	2.43E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	6.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	6.73E+00	1.70E+00	7.27E+00	0.00E+00	6.74E-01	0.00E+00	2.43E+00	0.00E+00
Consumption of secondary materials	kg	9.60E+00	7.60E-04	1.01E-03	0.00E+00	3.01E-04	0.00E+00	1.00E+01	0.00E+00
Consumption of renewable secondary fuels	MJ	2.61E-05	9.96E-06	3.23E-06	0.00E+00	3.95E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.16E-02	2.05E-04	1.40E-03	0.00E+00	8.15E-05	0.00E+00	3.79E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type GM-H1, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste, neutralized	kg	3.89E-02	2.44E-03	4.28E-02	0.00E+00	9.66E-04	0.00E+00	3.83E-06	0.00E+00
Non-hazardous waste neutralised	kg	9.25E-01	5.22E-02	8.47E-01	0.00E+00	2.07E-02	0.00E+00	1.00E+01	0.00E+00
Radioactive waste	kg	8.71E-06	5.00E-07	3.58E-05	0.00E+00	1.98E-07	0.00E+00	1.48E-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	2.56E-04	2.04E-05	7.27E-03	0.00E+00	8.07E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	4.44E-07	1.08E-07	1.12E-07	0.00E+00	4.28E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	8.05E-03	7.43E-04	1.34E-02	0.00E+00	2.95E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type GM-DFH1IR

Environmental impacts for 1 m ² gypsum plasterboard type GM-DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	4.97E-01	1.42E-01	4.15E-01	0.00E+00	5.62E-02	0.00E+00	1.26E-01	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	5.26E-01	1.41E-01	4.14E-01	0.00E+00	5.61E-02	0.00E+00	1.24E-01	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-6.04E-02	9.04E-05	5.05E-04	0.00E+00	3.59E-05	0.00E+00	1.25E-03	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	3.19E-02	4.70E-05	7.16E-05	0.00E+00	1.86E-05	0.00E+00	1.26E-04	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	1.19E-05	3.08E-09	4.43E-09	0.00E+00	1.22E-09	0.00E+00	3.78E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	3.87E-03	4.56E-04	2.54E-03	0.00E+00	1.80E-04	0.00E+00	1.05E-03	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.44E-04	9.66E-06	2.03E-04	0.00E+00	3.83E-06	0.00E+00	3.61E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.31E-03	1.53E-04	4.75E-04	0.00E+00	6.07E-05	0.00E+00	3.62E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	1.11E-02	1.67E-03	4.75E-03	0.00E+00	6.60E-04	0.00E+00	3.93E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.96E-03	6.90E-04	1.31E-03	0.00E+00	2.73E-04	0.00E+00	1.14E-03	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	4.39E-04	4.87E-07	4.56E-07	0.00E+00	1.93E-07	0.00E+00	4.21E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	7.68E+00	2.01E+00	8.58E+00	0.00E+00	7.96E-01	0.00E+00	2.87E+00	0.00E+00
Water deprivation potential	eq. m ³	2.53E-01	1.05E-02	7.25E-02	0.00E+00	4.17E-03	0.00E+00	1.67E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type GM-DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type GM-DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	5.23E-01	3.26E-02	3.60E-01	0.00E+00	1.30E-02	0.00E+00	5.04E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	4.12E-01	0.00E+00	5.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	9.35E-01	3.26E-02	3.60E-01	0.00E+00	1.30E-02	0.00E+00	5.04E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	7.16E+00	2.01E+00	8.58E+00	0.00E+00	7.96E-01	0.00E+00	2.87E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	7.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	7.94E+00	2.01E+00	8.58E+00	0.00E+00	7.96E-01	0.00E+00	2.87E+00	0.00E+00
Consumption of secondary materials	kg	1.13E+01	8.96E-04	1.19E-03	0.00E+00	3.56E-04	0.00E+00	1.18E+01	0.00E+00
Consumption of renewable secondary fuels	MJ	3.08E-05	1.18E-05	3.81E-06	0.00E+00	4.67E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.37E-02	2.42E-04	1.65E-03	0.00E+00	9.62E-05	0.00E+00	4.48E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type GM-DFH1IR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste, neutralized	kg	4.59E-02	2.87E-03	5.05E-02	0.00E+00	1.14E-03	0.00E+00	4.52E-06	0.00E+00
Non-hazardous waste neutralised	kg	1.09E+00	6.16E-02	9.99E-01	0.00E+00	2.45E-02	0.00E+00	1.18E+01	0.00E+00
Radioactive waste	kg	1.03E-05	5.90E-07	4.23E-05	0.00E+00	2.34E-07	0.00E+00	1.74E-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	3.02E-04	2.41E-05	8.58E-03	0.00E+00	9.52E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	5.24E-07	1.27E-07	1.33E-07	0.00E+00	5.05E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	9.50E-03	8.77E-04	1.58E-02	0.00E+00	3.48E-04	0.00E+00	0.00E+00	0.00E+00

LCA results for Plasterboard Technogips Pro Type GM-DFIR

Environmental impacts for 1 m ² gypsum plasterboard type GM-DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	4.43E-01	1.26E-01	3.69E-01	0.00E+00	5.00E-02	0.00E+00	1.12E-01	0.00E+00
Greenhouse gas potential - fossil	eq. kg CO ₂	4.68E-01	1.26E-01	3.69E-01	0.00E+00	4.99E-02	0.00E+00	1.10E-01	0.00E+00
Greenhouse gas potential - biogenic	eq. kg CO ₂	-5.37E-02	8.04E-05	4.49E-04	0.00E+00	3.19E-05	0.00E+00	1.12E-03	0.00E+00
Global warming potential - land use and land use change	eq. kg CO ₂	2.84E-02	4.18E-05	6.37E-05	0.00E+00	1.66E-05	0.00E+00	1.12E-04	0.00E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	1.06E-05	2.74E-09	3.94E-09	0.00E+00	1.09E-09	0.00E+00	3.36E-08	0.00E+00
Soil and water acidification potential	eq. mol H ⁺	3.44E-03	4.06E-04	2.26E-03	0.00E+00	1.60E-04	0.00E+00	9.33E-04	0.00E+00
Eutrophication potential - freshwater	eq. kg P	1.28E-04	8.59E-06	1.81E-04	0.00E+00	3.41E-06	0.00E+00	3.21E-05	0.00E+00
Eutrophication potential - seawater	eq. kg N	1.17E-03	1.36E-04	4.22E-04	0.00E+00	5.40E-05	0.00E+00	3.22E-04	0.00E+00
Eutrophication potential - terrestrial	eq. mol N	9.89E-03	1.48E-03	4.23E-03	0.00E+00	5.87E-04	0.00E+00	3.50E-03	0.00E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	2.64E-03	6.14E-04	1.16E-03	0.00E+00	2.43E-04	0.00E+00	1.01E-03	0.00E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.91E-04	4.34E-07	4.06E-07	0.00E+00	1.72E-07	0.00E+00	3.74E-07	0.00E+00
Abiotic depletion potential - fossil fuels	MJ	6.84E+00	1.79E+00	7.64E+00	0.00E+00	7.08E-01	0.00E+00	2.55E+00	0.00E+00
Water deprivation potential	eq. m ³	2.25E-01	9.35E-03	6.45E-02	0.00E+00	3.71E-03	0.00E+00	1.48E-02	0.00E+00

Additional impacts indicators for 1 m ² gypsum plasterboard type GM-DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	INA	INA	INA	INA	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA	INA	INA	INA	INA

Environmental aspects related to resource use for 1 m ² gypsum plasterboard type GM-DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	4.65E-01	2.90E-02	3.21E-01	0.00E+00	1.15E-02	0.00E+00	4.48E-02	0.00E+00
Consumption of renewable primary energy resources used as raw materials	MJ	3.67E-01	0.00E+00	5.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	8.32E-01	2.90E-02	3.21E-01	0.00E+00	1.15E-02	0.00E+00	4.48E-02	0.00E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	6.37E+00	1.79E+00	7.64E+00	0.00E+00	7.08E-01	0.00E+00	2.55E+00	0.00E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	6.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	7.06E+00	1.79E+00	7.64E+00	0.00E+00	7.08E-01	0.00E+00	2.55E+00	0.00E+00
Consumption of secondary materials	kg	1.01E+01	7.98E-04	1.06E-03	0.00E+00	3.16E-04	0.00E+00	1.05E+01	0.00E+00
Consumption of renewable secondary fuels	MJ	2.74E-05	1.05E-05	3.39E-06	0.00E+00	4.15E-06	0.00E+00	0.00E+00	0.00E+00
Consumption 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
Net consumption of freshwater resources	m ³	1.22E-02	2.16E-04	1.47E-03	0.00E+00	8.56E-05	0.00E+00	3.98E-04	0.00E+00

Environmental information describing waste categories for 1 m ² gypsum plasterboard type GM-DFIR, 12.5 mm									
Indicator	Unit	A1	A2	A3	C1	C2	C3	C4	D
Hazardous waste, neutralized	kg	4.08E-02	2.56E-03	4.49E-02	0.00E+00	1.01E-03	0.00E+00	4.02E-06	0.00E+00
Non-hazardous waste neutralised	kg	9.71E-01	5.48E-02	8.89E-01	0.00E+00	2.18E-02	0.00E+00	1.05E+01	0.00E+00
Radioactive waste	kg	9.14E-06	5.25E-07	3.76E-05	0.00E+00	2.08E-07	0.00E+00	1.55E-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	2.69E-04	2.14E-05	7.63E-03	0.00E+00	8.47E-06	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	4.66E-07	1.13E-07	1.18E-07	0.00E+00	4.49E-08	0.00E+00	0.00E+00	0.00E+00
Energy exported	MJ	8.46E-03	7.81E-04	1.41E-02	0.00E+00	3.10E-04	0.00E+00	0.00E+00	0.00E+00

EPD verification

The process of verification of this EPD is in accordance with ISO 14025. After verification, this EPD is valid for a 5-year period. EPD does not have to be recalculated after 5 years, if the underlying data have not changed significantly.

The basis for LCA analysis was EN 15804+A2 and ITB PCR A	
Independent verification corresponding to ISO 14025 (subclause 8.1.3.)	
☒ external	☐ internal
External verification of EPD: Halina Prejzner, PhD. Eng.	
LCI data, audit and verification: Michał Chwedaczuk, M.Sc. Eng.	
LCA, LCI audit and input data verification: Michał Piasecki, PhD., D.Sc., Eng.	

Note 1: The declaration owner has the sole ownership, liability, and responsibility for the information provided and contained in EPD. Declarations of construction products may not be comparable if they do not comply with EN 15804+A2. For further information about comparability, see EN 15804+A2 and ISO 14025.

Note 2: ITB is a public Research Organization and Notified Body (EC Reg. no 1488) to the European Commission and to other Member States of the European Union designated for the tasks concerning the assessment of building products' performance. ITB acts as the independent, third-party verification organization (see ISO 17025/17065/17029). ITB-EPD program is recognized and registered member of The European Platform - Association of EPD program operators and ITB-EPD declarations are registered and stored in the international ECO-PORTAL.

References

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- [2] EN 15804:2012+A2:2019 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
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- [4] BDS EN ISO 14025:2006, Environmental management – Type III environmental declarations – Principles and procedure
- [5] BDS EN ISO 14040:2006, Environmental management -- Life cycle assessment -- Principles and framework
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- [8] EN 520:2004+A1:2009 Gypsum plasterboards – definitions, requirements and test methods
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- [11] Declaration of Performance CPR 022576 TG PL 110/01.05.2020 for gypsum plasterboard type A
- [12] Declaration of Performance CPR 022576 TG PL 120/01.05.2020 for gypsum plasterboard type H
- [13] Declaration of Performance CPR 022576 TG PL 130/01.05.2020 for gypsum plasterboard type DF

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- [15] Declaration of Performance PL171/01.05.2020 for gypsum plasterboard type DFH1IR
- [16] Declaration of Performance CPR 022576 TG PL 141/01.05.2020 for gypsum board type GM-FH1-IR
- [17] Data safety sheet for gypsum plasterboard type A– 01.07.2019
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- [30] Bulgarian Waters Act, State Gazette No 67 dated 91 dated 27.07.1999, last amend. SG No 25 dated 26.03.2019 (Закон за водите)
- [31] Bulgarian Ordinance No.6 for construction and use of landfills and other facilities for waste recovery and disposal, State Gazette No 80 dated 13 Sept 2013г., last amend. SG No 13 dated 7.02.2017 (Наредба № 6 от 27 август 2013 г. за условията и изискванията за изграждане и експлоатация на депа и на други съоръжения и инсталации за оползотворяване и обезвреждане на отпадъци).
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- [33] [Ecoinvent.org](http://ecoinvent.org)

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