Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

Cold Panel

from

KIDE S.COOP

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-00353
Publication date:	2012-08-28
Verification date:	2021-03-16
Valid until:	2026-03-15
Scope:	International

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

General information

Programme information

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

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): *PCR 2019:14 Construction products, version 1.1* *SubPCR-C 005 Thermal insulation products (EN 16783). UN CPC code 54650.*
PCR review was conducted by: *The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.*
Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☒ External ☐ Internal Covering ☐ EPD process certification ☒ EPD verification
Third party verifier: *Marcel Gómez, Marcel Gómez Consultoría Ambiental* *Email: info@marcelgomez.com. Tlf: 34630643593. www.marcelgomez.com* Approved by: The International EPD® System Technical Committee, supported by the Secretariat.
Procedure for follow-up of data during EPD validity involves third party verifier: ☒ Yes ☐ No

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.

Company information

Owner of the EPD: KIDE S.COOP
Contact: kide@kide.com; Ekaitz Arandilla: earandil@kide.com
Description of the organisation:
KIDE S.COOP is a business Group manufacturer of cold-rooms, insulation panels, insulated doors, refrigeration units and drying units, offering integral solutions to its clients and developing valuable relations with the agents it works with.

It is aimed at different sectors where activity mostly deals with installers and distributors, and it seeks to stand out in terms of its quality and service, with a value proposal that sets it apart, being a group of reference in a national sphere while having international projection.

It is a Group of companies based on cooperative principles, integrated into the MONDRAGON Group, and whose final objective is to grow in a sustainable manner, creating wealth and well-being as well as support in cultural development within its surroundings
www.kide.com

Product-related or management system-related certifications:

- ISO 9.001:2.015 Quality Management System
- ISO 14.001:2.015 Environment Management System GA
- Industrial cold panel certified N by AENOR: 020/003369
- Modular cold panel certified N by AENOR
- Avis Technique certificate- Industrial cold panel: 2/16-1762

Name and location of production site(s):
KIDE S.COOP
Pol Gardotza s/n- (48710) Berriatua-Bizkaia- Spain.

Product information

Product name: COLD PANEL
Product identification: Thermal insulation panel
Product description:
The prefabricated KIDE panels are made up of an insulating core of rigid polyurethane foam, the 2 surfaces of which receive a cover of electrogalvanized sheet steel.
They are lacquered in their standard version.
The panels are joined together to make walls, floors and insulated roofs, thereby forming a cold room, or an air-conditioned enclosure at positive or negative.

UN CPC code: 54650

Technical information:

- Thermal resistance, R, ($K \cdot m^2 \cdot W-1$) (UNE-EN 12667). Depending on the thicknesses:

Thickness (mm)	60	75	80	100	120	150	180	200
R	0,4	0,32	0,3	0,24	0,2	0,15	0,14	0,12

- Thermal conductivity: 0,025W/(m·K) (UNE-EN 12667)
- Reaction to fire: Euroclase Bs2d0 (UNE-EN 13501-1)
- Water permeability: Class A (UNE EN 12865)

- Air permeability: n:0,70 C:0,19 (UNE EN 12144)
- Acoustic isolation: Rw:24 (-1;2) (UNE EN ISO 140-3)
- Density: 40+-3 Kg /m3 (UNE EN 1602)
- Tensile strength: 0,09 MPa (UNE EN 1607)
- Compressive strength: 0,19 MPa (UNE EN 826)
- Shear strength (UNE EN 14509). Depending on the thicknesses:

Thickness (mm)	60	75	80	100	120	150	180	200
MPa	0,12	0,12	0,12	0,10	0,1	0,08	0,08	0,08

Name and contact information of organisation carrying out the underlying LCA study: Tecnalia Research & Innovation, arantza.lopez@tecnalia.com

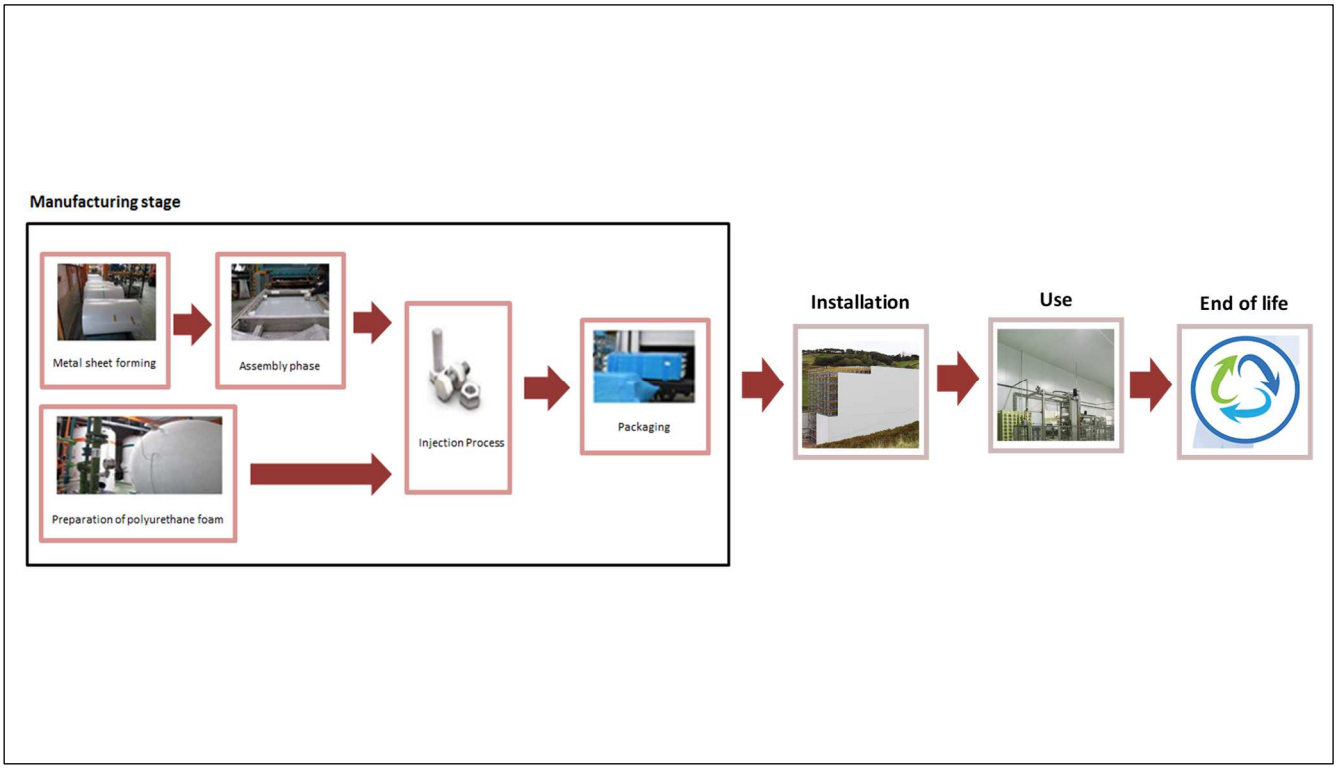
LCA information

Functional unit / declared unit: 1 m^2 of insulation panel "Cold panel" of 60mm thickness with a conductivity of 0,025 (W/m K) and a thermal resistance of:

Thickness (mm)	60	75	80	100	120	150	180	200
R ($K \cdot m^2 \cdot W$-1)	0,4	0,32	0,3	0,24	0,2	0,15	0,14	0,12

Reference service life: 50 years
Time representativeness: 2018
Database(s) and LCA software used: Ecoinvent v3.5, SimaPro 9.0.
Description of system boundaries: Cradle to grave and module D (A + B + C + D)

System diagram:



Metal Sheet forming: In this phase, the metal sheet is cutted and covered with polyethylene film protector.
Assembly phase: In this stage, both metal faces of the panel are fixed with auxiliary materials like profiles and hooks.
Preparation of Polyurethane Foam components: In this stage polyol is mixed with expanded gas. Isocyanate and the polyol mixed with the expanded gas are contained into separated tanks ready for the injection process.
Injection process: the metal frame is placed into the press. At this stage, the metal frames are filled with inert gas and isocyanate and polyol-gas are subsequently injected into the metal frame. The isocyanate and polyol-expanded gas mixture react inside the panel, and the polyurethane foam is formed. After a curing period in the press, the final product is ready.
Packaging: The production process is considered complete at the time the order is completely packaged and sent for dispatch.
Installation: the panels are installed manually. Silicone, polyurethane and stainless-steel anchorages are used.

Use: during the use phase, there are not energy consumption and there are no maintenance needs.

End of life: in the end of life stage the steel from the panel is recovered. More than the 80% in weight of the panel continuous in the life loop.

Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

	Product stage		Construction process stage			Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Geography	EU																EU
Specific data	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	Product specific					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	Manufactured in one site					-	-	-	-	-	-	-	-	-	-	-	-

Total carbon dioxide emissions due to upstream electricity used in the manufacturing process: 311g CO_2 eq per kWh.

Spanish electricity mix for the year 2018 has been used in the assessment. According to the spanish electrical network[1], the contribution of each source was the one included in the following table.

Source	Percentaje in a kWh	G CO_2 eq in a kWh
Hydro	14%	6
Turbine pumping	1%	<1
Nuclear	21%	2
Hard coal	14%	178
Combined cycle	14%	69
Wind	19%	2
Solar PV	3%	<1
Solar thermal	2%	<1
Other renowables	1%	<1
Cogeneration	11%	32

Total carbon dioxide emissions associated to the consumption of 1kWh in Spain in the reference year were: 311g $CO_{2\ eq}$ per kWh.
The modularity, as well as the polluter-payer principle have been followed.
Allocation procedure: where necessary an allocation based in mass has been used.
The next processes have not been included since its impact is not significant: Environmental impact from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process. o Personnel-related impacts, such as transportation to and from work.

Content information

Product components	Weight (60mm), kg	Post-consumer material, weight-%	Renewable material, weight-%
Core / Polyurethane foam	2,45	<1%	-
Faces / Metal sheet	9,61	70%	-
Cam-lock / Polypropylene	0,046	<1%	-
Cam-lock / Stainless steel	0,024	<1%	-
Cam-lock / Polyamide	0,005	<1%	-
TOTAL	12,13	>70%	-
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Polyethylene film	0,03	<1%	
TOTAL	0,03	>99%	

[1] http://www.ree.es/es/estadisticas-del-sistema-electrico-espanol/balance-diario

Note: More than 99% of the total of energy and raw materials use, and more than 95% per module. During the life cycle of the product no hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has been used in a percentage higher than 0.1% of the weight of the product.

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 60mm thickness												
Indicator	**Unit**	**A1**	**A2**	**A3**	**Tot.A1 -A3**	**A4**	**A5**	**B1-C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq.	3,38E+01	8,30E-01	2,87E-01	3,50E+01	5,11E-01	1,75E-01	0,00E+00	5,42E-01	8,03E-02	1,35 E-02	-1,45E+01
GWP-biogenic	kg CO_2 eq.	1,47E+00	4,74E-03	9,71E-03	1,49E+00	2,24E-03	6,65E-03	0,00E+00	2,38E-03	6,92E-04	1,03 E-04	-2,27E-01
GWP-luluc	kg CO_2 eq.	4,61E-02	3,50E-04	3,67E-03	5,02E-02	1,29E-04	4,54E-05	0,00E+00	1,37E-04	2,69E-05	3,69 E-06	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	3,39E+01	8,30E-01	2,88E-01	3,50E+01	5,11E-01	1,76E-01	0,00E+00	5,42E-01	8,03E-02	1,35 E-02	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	3,78E+01	8,30E-01	2,88E-01	3,89E+01	5,11E-01	2,15E-01	0,00E+00	5,42E-01	8,03E-02	1,35 E-02	-1,45E+01
ODP	kg CFC 11 eq.	3,71E-06	1,72E-07	2,99E-08	3,91E-06	1,24E-07	2,45E-08	0,00E+00	1,32E-07	2,95E-08	6,12 E-09	-7,68E-07
AP	mol H^+ eq.	3,71E-02	1,10E-04	1,57E-04	3,73E-02	2,64E-03	8,97E-04	0,00E+00	2,80E-03	6,89E-04	1,41 E-04	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	3,71E-02	1,10E-04	1,57E-04	3,73E-02	4,09E-05	4,20E-05	0,00E+00	4,33E-05	1,09E-05	1,33 E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	3,77E-02	1,10E-04	1,57E-04	3,79E-02	4,09E-05	5,57E-05	0,00E+00	4,33E-05	1,09E-05	1,54 E-06	-1,68E-02
EP-marine	kg N eq.	4,78E-02	1,94E-03	3,47E-04	5,01E-02	8,84E-04	1,96E-04	0,00E+00	9,37E-04	2,31E-04	1,54 E-06	-1,64E-02
EP-terrestrial	mol N eq.	4,93E-01	2,21E-02	3,96E-03	5,19E-01	9,73E-03	1,72E-03	0,00E+00	1,03E-02	2,55E-03	4,40 E-05	-1,82E-01
POCP	kg NMVOC eq.	2,27E-01	1,81E-02	2,28E-03	2,47E-01	2,89E-03	6,10E-04	0,00E+00	3,06E-03	7,32E-04	4,84 E-04	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	4,50E-04	5,35E-07	6,12E-07	4,51E-04	9,66E-07	2,23E-07	0,00E+00	1,02E-06	1,36E-07	1,52 E-08	-2,37E-04
ADP-fossil*	MJ	4,18E+02	1,19E+01	3,39E+00	4,34E+02	8,09E+00	2,53E+00	0,00E+00	8,59E+00	1,98E+00	4,08 E-01	-1,45E+02
WDP	m^3	1,45E+01	7,83E-02	3,01E-01	1,49E+01	4,80E-02	1,50E-01	0,00E+00	5,09E-02	7,22E-02	1,85 E-02	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption											

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 60mm thickness												
Indicator	**Unit**	**A1**	**A2**	**A3**	**Tot.A1-A3**	**A4**	**A5**	**B1-C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	6,50E+01	2,59E-01	1,82E+00	6,71E+01	8,72E-02	1,56E-01	0,00E+00	9,25E-02	2,33E-02	3,39E-03	-1,53E+01
PERM	MJ	6,41E-03	0,00E+00	0,00E+00	6,41E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	6,51E+01	2,59E-01	1,82E+00	6,71E+01	8,72E-02	1,56E-01	0,00E+00	9,25E-02	2,33E-02	3,39E-03	-1,53E+01
PENRE	MJ	7,34E+02	1,31E+01	6,53E+00	7,54E+02	8,74E+00	1,84E+00	0,00E+00	9,27E+00	2,14E+00	4,40E-01	-1,62E+02
PENRM	MJ.	8,14E+00	0,00E+00	0,00E+00	8,14E+00	0,00E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	7,42E+02	1,31E+01	6,53E+00	7,62E+02	8,74E+00	3,12E+00	0,00E+00	9,27E+00	2,14E+00	4,40E-01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	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	0,00E+00	0,00E+00	0,00E+00
NRSF	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	2,33E-02	0,00E+00	0,00E+00
FW	m^3	3,36E+02	1,36E+00	6,44E+00	3,44E+02	4,23E-01	2,59E-01	0,00E+00	4,49E-01	1,03E-01	1,58E-02	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water											

Waste production and output flows

Waste production

Results per functional or declared unit - 60mm thickness												
Indicator	**Unit**	**A1**	**A2**	**A3**	**Tot.A1-A3**	**A4**	**A5**	**B1-C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1,21E-03	7,68E-06	6,70E-06	1,23E-03	4,77E-06	3,50E-06	0,00E+00	5,06E-06	1,40E-06	2,77E-07	-1,09E-03
Non-hazardous waste disposed	kg	3,36E+00	2,84E-01	1,33E-01	3,77E+00	7,01E-01	1,04E-02	0,00E+00	7,44E-01	9,60E+00	2,55E+00	-6,06E+00
Radioactive waste disposed	kg	2,14E-03	8,10E-05	4,32E-05	2,26E-03	5,59E-05	2,49E-06	0,00E+00	5,94E-05	1,34E-05	2,74E-06	-3,12E-04

Output flows

Results per functional or declared unit - 60mm thickness												
Indicator	**Unit**	**A1**	**A2**	**A3**	**Tot.A1-A3**	**A4**	**A5**	**B1-C1**	**C2**	**C3**	**C4**	**D**
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	9,61E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	1,30E+00	1,30E+00	0,00E+00	0,00E+00	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	9,61E-02	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	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	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	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	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 60mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

Additional information

End of life phase

The life span of the panels is around 50 years. At the end of its lifetime, the steel sheet is recycled.

Differences versus previous versions

The declaration has been adapted to the requirements of the new version of EN 15804:2010+A2

The main associated changes have been:

- The scope is from cradle to grave instead of from cradle to gate.
- New environmental impact categories have been included and the methods used to calculate them are the recommended by the EN 15804:2010+A2 (March 2020)

Energy consumption reduction

The energy consumption in the manufacturing place has been reduced in 10% thanks to the substitution of the regular light bulbs and the implementation of LED bulbs.

References

General Programme Instructions of the International EPD® System. Version 3.01.
PCR 2019:14. Construction products. Version 1.1
SUB-PCR to c-PCR 2012:01 thermal insulation products (EN 16783:2017)

Reference	Title
C-PCR-005 (to PCR 2019:14)	Thermal insulation products (EN 16783:2017)
ISO 14040	Environmental management – Life cycle assessment – Principles and framework. 2006.
ISO 14025	Environmental labels and declarations – Type III environmental declarations – principles and procedures. 2006.
ISO 14044	Environmental management – Life cycle assessment – Requirements and guidelines. 2006
EN 13172	Productos aislantes térmicos. Evaluación de la conformidad
UNE-EN 15804:2012 + A2	Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products.
EN 15942	Sostenibilidad en la construcción. Declaraciones ambientales de producto. Formato de comunicación negocio a negocio.
EN 15978	Sostenibilidad en la construcción. Evaluación del comportamiento ambiental de los edificios. Métodos de cálculo.
EN ISO 9229	Aislamiento térmico. Vocabulario (ISO9229)
CEN/TR 16970	Sostenibilidad en la construcción. Directrices para la implementación de la norma EN 15804. (UNE-CEN/TR 16970:2016)
PCR 2012:01 v2.3	Construction products and construction services.
PCR 2019:14 v 1.1	Construction products.
UNE EN 16783:2017	Productos de aislamiento térmico. Reglas de categoría de producto (RCP) para productos manufacturados y formados in situ, destinadas a la elaboración de declaraciones ambientales de producto.
SUB-PCR to PCR 2012:01	Thermal insulation products (EN 16783:2017)
EPD International (2017)	General Programme Instructions for the International EPD System. Version 3.0.

Annex I - Environmental Information Cold Panel 75mm

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 75mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
GWP-fossil	kg CO_2 eq.	3,72E+01	7,02E-01	0,00E+00	6,57E-01	-1,45E+01
GWP-biogenic	kg CO_2 eq.	1,55E+00	8,97E-03	0,00E+00	3,28E-03	-2,27E-01
GWP-luluc	kg CO_2 eq.	5,23E-02	1,78E-04	0,00E+00	1,73E-04	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	3,72E+01	7,03E-01	0,00E+00	6,57E-01	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	4,20E+01	7,42E-01	0,00E+00	6,57E-01	-1,45E+01
ODP	kg CFC 11 eq.	4,39E-06	1,53E-07	0,00E+00	1,73E-07	-7,68E-07
AP	mol H^+ eq.	3,84E-02	3,62E-03	0,00E+00	3,76E-03	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	3,84E-02	8,41E-05	0,00E+00	2,19E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	3,91E-02	9,78E-05	0,00E+00	5,75E-05	-1,68E-02
EP-marine	kg N eq.	5,43E-02	1,11E-03	0,00E+00	1,20E-03	-1,64E-02
EP-terrestrial	mol N eq.	5,50E-01	1,18E-02	0,00E+00	1,33E-02	-1,82E-01
POCP	kg NMVOC eq.	2,62E-01	3,59E-03	0,00E+00	4,49E-03	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	4,62E-04	1,22E-06	0,00E+00	1,21E-06	-2,37E-04
ADP-fossil*	MJ	4,71E+02	1,09E+01	0,00E+00	1,14E+01	-1,45E+02
WDP	m^3	1,63E+01	1,99E-01	0,00E+00	1,47E-01	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 75mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
PERE	MJ	7,05E+01	2,46E-01	0,00E+00	1,23E-01	-1,53E+01
PERM	MJ	7,05E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,05E+01	2,46E-01	0,00E+00	1,23E-01	-1,53E+01
PENRE	MJ	8,20E+02	1,08E+01	0,00E+00	1,23E+01	-1,62E+02
PENRM	MJ.	8,32E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	8,28E+02	1,21E+01	0,00E+00	1,23E+01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	2,33E-02	0,00E+00

FW	m^3	3,53E+02	6,95E-01	0,00E+00	5,86E-01	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Waste production and output flows

Waste production

Results per functional or declared unit - 75mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Hazardous waste disposed	kg	1,27E-03	8,42E-06	0,00E+00	6,97E-06	-1,09E-03
Non-hazardous waste disposed	kg	4,04E+00	7,33E-01	0,00E+00	1,35E+01	-6,06E+00
Radioactive waste disposed	kg	2,39E-03	6,02E-05	0,00E+00	7,81E-05	-3,12E-04

Output flows

Results per functional or declared unit - 75mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	9,61E+00	0,00E+00
Material for recycling	kg	1,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 75mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

Annex II - Environmental Information Cold Panel 80mm

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 80mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
GWP-fossil	kg CO_2 eq.	3,80E+01	7,10E-01	0,00E+00	6,68E-01	-1,45E+01
GWP-biogenic	kg CO_2 eq.	1,57E+00	9,00E-03	0,00E+00	3,33E-03	-2,27E-01
GWP-luluc	kg CO_2 eq.	5,29E-02	1,81E-04	0,00E+00	1,76E-04	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	3,80E+01	7,12E-01	0,00E+00	6,68E-01	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	4,31E+01	7,51E-01	0,00E+00	6,67E-01	-1,45E+01
ODP	kg CFC 11 eq.	4,57E-06	1,55E-07	0,00E+00	1,76E-07	-7,68E-07
AP	mol H^+ eq.	3,87E-02	3,67E-03	0,00E+00	3,82E-03	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	3,87E-02	8,48E-05	0,00E+00	2,30E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	3,95E-02	9,85E-05	0,00E+00	5,84E-05	-1,68E-02
EP-marine	kg N eq.	5,58E-02	1,12E-03	0,00E+00	1,22E-03	-1,64E-02
EP-terrestrial	mol N eq.	5,61E-01	1,19E-02	0,00E+00	1,35E-02	-1,82E-01
POCP	kg NMVOC eq.	2,68E-01	3,63E-03	0,00E+00	4,58E-03	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	4,66E-04	1,23E-06	0,00E+00	1,23E-06	-2,37E-04
ADP-fossil*	MJ	4,85E+02	1,10E+01	0,00E+00	1,15E+01	-1,45E+02
WDP	m^3	1,68E+01	2,00E-01	0,00E+00	1,50E-01	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 80mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
PERE	MJ	7,17E+01	2,47E-01	0,00E+00	1,25E-01	-1,53E+01
PERM	MJ	7,53E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,17E+01	2,47E-01	0,00E+00	1,25E-01	-1,53E+01
PENRE	MJ	8,44E+02	1,10E+01	0,00E+00	1,25E+01	-1,62E+02
PENRM	MJ.	8,34E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	8,52E+02	1,23E+01	0,00E+00	1,25E+01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	2,33E-02	0,00E+00

FW	m^3	3,56E+02	7,02E-01	0,00E+00	5,95E-01	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Waste production and output flows

Waste production

Results per functional or declared unit - 80mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Hazardous waste disposed	kg	1,28E-03	8,50E-06	0,00E+00	7,08E-06	-1,09E-03
Non-hazardous waste disposed	kg	4,13E+00	7,45E-01	0,00E+00	1,37E+01	-6,06E+00
Radioactive waste disposed	kg	2,44E-03	6,11E-05	0,00E+00	7,93E-05	-3,12E-04

Output flows

Results per functional or declared unit - 80mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	9,61E+00	0,00E+00
Material for recycling	kg	1,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 80mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

Annex III - Environmental Information Cold Panel 100mm

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 100mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
GWP-fossil	kg CO_2 eq.	4,08E+01	7,41E-01	0,00E+00	7,04E-01	-1,45E+01
GWP-biogenic	kg CO_2 eq.	1,64E+00	9,14E-03	0,00E+00	3,50E-03	-2,27E-01
GWP-luluc	kg CO_2 eq.	5,58E-02	1,88E-04	0,00E+00	1,85E-04	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	4,09E+01	7,42E-01	0,00E+00	7,04E-01	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	4,70E+01	7,81E-01	0,00E+00	7,04E-01	-1,45E+01
ODP	kg CFC 11 eq.	5,19E-06	1,62E-07	0,00E+00	1,86E-07	-7,68E-07
AP	mol H^+ eq.	4,00E-02	3,82E-03	0,00E+00	4,03E-03	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	4,00E-02	8,73E-05	0,00E+00	2,71E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	4,10E-02	1,01E-04	0,00E+00	6,14E-05	-1,68E-02
EP-marine	kg N eq.	6,13E-02	1,18E-03	0,00E+00	1,27E-03	-1,64E-02
EP-terrestrial	mol N eq.	6,01E-01	1,25E-02	0,00E+00	1,41E-02	-1,82E-01
POCP	kg NMVOC eq.	2,87E-01	3,81E-03	0,00E+00	4,90E-03	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	4,81E-04	1,29E-06	0,00E+00	1,30E-06	-2,37E-04
ADP-fossil*	MJ	5,32E+02	1,15E+01	0,00E+00	1,22E+01	-1,45E+02
WDP	m^3	1,87E+01	2,03E-01	0,00E+00	1,58E-01	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 100mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
PERE	MJ	7,61E+01	2,52E-01	0,00E+00	1,31E-01	-1,53E+01
PERM	MJ	9,15E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,61E+01	2,52E-01	0,00E+00	1,31E-01	-1,53E+01
PENRE	MJ	9,28E+02	1,15E+01	0,00E+00	1,31E+01	-1,62E+02
PENRM	MJ.	8,42E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	9,37E+02	1,28E+01	0,00E+00	1,31E+01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	2,33E-02	0,00E+00

FW	m^3	3,68E+02	7,28E-01	0,00E+00	6,26E-01	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Waste production and output flows

Waste production

Results per functional or declared unit - 100mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Hazardous waste disposed	kg	1,33E-03	8,78E-06	0,00E+00	7,46E-06	-1,09E-03
Non-hazardous waste disposed	kg	4,48E+00	7,87E-01	0,00E+00	1,45E+01	-6,06E+00
Radioactive waste disposed	kg	2,60E-03	6,45E-05	0,00E+00	8,36E-05	-3,12E-04

Output flows

Results per functional or declared unit - 100mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	9,61E+00	0,00E+00
Material for recycling	kg	1,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 100mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

Annex IV - Environmental Information Cold Panel 120mm

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 120mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
GWP-fossil	kg CO_2 eq.	4,40E+01	7,75E-01	0,00E+00	7,44E-01	-1,45E+01
GWP-biogenic	kg CO_2 eq.	1,73E+00	9,29E-03	0,00E+00	3,69E-03	-2,27E-01
GWP-luluc	kg CO_2 eq.	6,03E-02	1,97E-04	0,00E+00	1,95E-04	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	4,41E+01	7,76E-01	0,00E+00	7,45E-01	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	5,15E+01	8,15E-01	0,00E+00	7,44E-01	-1,45E+01
ODP	kg CFC 11 eq.	5,89E-06	1,70E-07	0,00E+00	1,96E-07	-7,68E-07
AP	mol H^+ eq.	4,16E-02	4,00E-03	0,00E+00	4,26E-03	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	4,16E-02	9,00E-05	0,00E+00	3,16E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	4,27E-02	1,04E-04	0,00E+00	6,48E-05	-1,68E-02
EP-marine	kg N eq.	6,74E-02	1,23E-03	0,00E+00	1,34E-03	-1,64E-02
EP-terrestrial	mol N eq.	6,46E-01	1,32E-02	0,00E+00	1,48E-02	-1,82E-01
POCP	kg NMVOC eq.	3,10E-01	4,00E-03	0,00E+00	5,26E-03	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	4,97E-04	1,36E-06	0,00E+00	1,37E-06	-2,37E-04
ADP-fossil*	MJ	5,87E+02	1,20E+01	0,00E+00	1,29E+01	-1,45E+02
WDP	m^3	2,08E+01	2,06E-01	0,00E+00	1,67E-01	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 120mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
PERE	MJ	8,17E+01	2,58E-01	0,00E+00	1,39E-01	-1,53E+01
PERM	MJ	1,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	8,17E+01	2,58E-01	0,00E+00	1,39E-01	-1,53E+01
PENRE	MJ	1,02E+03	1,21E+01	0,00E+00	1,39E+01	-1,62E+02
PENRM	MJ.	8,50E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,03E+03	1,34E+01	0,00E+00	1,39E+01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	2,33E-02	0,00E+00

FW	m^3	3,84E+02	7,56E-01	0,00E+00	6,61E-01	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Waste production and output flows

Waste production

Results per functional or declared unit - 120mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Hazardous waste disposed	kg	1,39E-03	9,10E-06	0,00E+00	7,89E-06	-1,09E-03
Non-hazardous waste disposed	kg	4,86E+00	8,33E-01	0,00E+00	1,53E+01	-6,06E+00
Radioactive waste disposed	kg	2,81E-03	6,82E-05	0,00E+00	8,85E-05	-3,12E-04

Output flows

Results per functional or declared unit - 120mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	9,61E+00	0,00E+00
Material for recycling	kg	1,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 120mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

Annex V - Environmental Information Cold Panel 150mm

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 150mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
GWP-fossil	kg CO_2 eq.	4,77E+01	8,79E-01	0,00E+00	8,60E-01	-1,45E+01
GWP-biogenic	kg CO_2 eq.	1,82E+00	9,74E-03	0,00E+00	4,21E-03	-2,27E-01
GWP-luluc	kg CO_2 eq.	6,61E-02	2,23E-04	0,00E+00	2,24E-04	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	4,78E+01	8,80E-01	0,00E+00	8,60E-01	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	5,65E+01	9,19E-01	0,00E+00	8,60E-01	-1,45E+01
ODP	kg CFC 11 eq.	6,67E-06	1,96E-07	0,00E+00	2,25E-07	-7,68E-07
AP	mol H^+ eq.	4,33E-02	4,54E-03	0,00E+00	4,88E-03	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	4,33E-02	9,83E-05	0,00E+00	3,72E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	4,46E-02	1,12E-04	0,00E+00	7,42E-05	-1,68E-02
EP-marine	kg N eq.	7,43E-02	1,41E-03	0,00E+00	1,53E-03	-1,64E-02
EP-terrestrial	mol N eq.	6,98E-01	1,51E-02	0,00E+00	1,69E-02	-1,82E-01
POCP	kg NMVOC eq.	3,36E-01	4,59E-03	0,00E+00	6,06E-03	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	5,15E-04	1,55E-06	0,00E+00	1,59E-06	-2,37E-04
ADP-fossil*	MJ	6,48E+02	1,37E+01	0,00E+00	1,48E+01	-1,45E+02
WDP	m^3	2,32E+01	2,16E-01	0,00E+00	1,84E-01	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 150mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
PERE	MJ	8,82E+01	2,76E-01	0,00E+00	1,59E-01	-1,53E+01
PERM	MJ	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	8,82E+01	2,76E-01	0,00E+00	1,59E-01	-1,53E+01
PENRE	MJ	1,13E+03	1,39E+01	0,00E+00	1,59E+01	-1,62E+02
PENRM	MJ.	8,64E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,14E+03	1,52E+01	0,00E+00	1,59E+01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	2,33E-02	0,00E+00

FW	m^3	4,03E+02	8,42E-01	0,00E+00	7,58E-01	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Waste production and output flows

Waste production

Results per functional or declared unit - 150mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Hazardous waste disposed	kg	1,46E-03	1,01E-05	0,00E+00	9,02E-06	-1,09E-03
Non-hazardous waste disposed	kg	5,30E+00	9,76E-01	0,00E+00	1,64E+01	-6,06E+00
Radioactive waste disposed	kg	3,04E-03	7,96E-05	0,00E+00	1,02E-04	-3,12E-04

Output flows

Results per functional or declared unit - 150mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	9,61E+00	0,00E+00
Material for recycling	kg	1,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 150mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

Annex V - Environmental Information Cold Panel 180mm

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 180mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
GWP-fossil	kg CO_2 eq.	5,25E+01	9,27E-01	0,00E+00	9,17E-01	-1,45E+01
GWP-biogenic	kg CO_2 eq.	1,95E+00	9,96E-03	0,00E+00	4,48E-03	-2,27E-01
GWP-luluc	kg CO_2 eq.	7,52E-02	2,35E-04	0,00E+00	2,39E-04	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	5,26E+01	9,29E-01	0,00E+00	9,18E-01	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	6,31E+01	9,67E-01	0,00E+00	9,17E-01	-1,45E+01
ODP	kg CFC 11 eq.	7,69E-06	2,07E-07	0,00E+00	2,41E-07	-7,68E-07
AP	mol H^+ eq.	4,55E-02	4,79E-03	0,00E+00	5,21E-03	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	4,55E-02	1,02E-04	0,00E+00	4,37E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	4,71E-02	1,16E-04	0,00E+00	7,90E-05	-1,68E-02
EP-marine	kg N eq.	8,33E-02	1,50E-03	0,00E+00	1,62E-03	-1,64E-02
EP-terrestrial	mol N eq.	7,65E-01	1,61E-02	0,00E+00	1,79E-02	-1,82E-01
POCP	kg NMVOC eq.	3,69E-01	4,86E-03	0,00E+00	6,57E-03	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	5,38E-04	1,64E-06	0,00E+00	1,69E-06	-2,37E-04
ADP-fossil*	MJ	7,28E+02	1,45E+01	0,00E+00	1,58E+01	-1,45E+02
WDP	m^3	2,64E+01	2,20E-01	0,00E+00	1,98E-01	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 180mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
PERE	MJ	9,74E+01	2,84E-01	0,00E+00	1,69E-01	-1,53E+01
PERM	MJ	1,62E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	9,74E+01	2,84E-01	0,00E+00	1,69E-01	-1,53E+01
PENRE	MJ	1,28E+03	1,47E+01	0,00E+00	1,70E+01	-1,62E+02
PENRM	MJ.	8,76E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,28E+03	1,60E+01	0,00E+00	1,70E+01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	2,33E-02	0,00E+00

FW	m^3	4,30E+02	8,82E-01	0,00E+00	8,08E-01	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Waste production and output flows

Waste production

Results per functional or declared unit - 180mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Hazardous waste disposed	kg	1,55E-03	1,05E-05	0,00E+00	9,62E-06	-1,09E-03
Non-hazardous waste disposed	kg	5,87E+00	1,04E+00	0,00E+00	1,76E+01	-6,06E+00
Radioactive waste disposed	kg	3,35E-03	8,49E-05	0,00E+00	1,08E-04	-3,12E-04

Output flows

Results per functional or declared unit - 180mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	9,61E+00	0,00E+00
Material for recycling	kg	1,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 180mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

Annex V - Environmental Information Cold Panel 200mm

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit - 200mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
GWP-fossil	kg CO_2 eq.	5,57E+01	1,02E+00	0,00E+00	1,02E+00	-1,45E+01
GWP-biogenic	kg CO_2 eq.	2,03E+00	1,04E-02	0,00E+00	4,96E-03	-2,27E-01
GWP-luluc	kg CO_2 eq.	8,18E-02	2,59E-04	0,00E+00	2,66E-04	-5,17E-03
GWP-total (IPCC)	kg CO_2 eq.	5,58E+01	1,02E+00	0,00E+00	1,02E+00	-1,45E+01
GWP-total (CML)	kg CO_2 eq.	6,75E+01	1,06E+00	0,00E+00	1,02E+00	-1,45E+01
ODP	kg CFC 11 eq.	8,37E-06	2,30E-07	0,00E+00	2,67E-07	-7,68E-07
AP	mol H^+ eq.	4,70E-02	5,27E-03	0,00E+00	5,77E-03	-8,22E-02
EP-freshwater	kg PO_4^{3-} eq.	4,70E-02	1,10E-04	0,00E+00	4,85E-04	-1,68E-02
EP-freshwater (EF)	kg P eq.	4,88E-02	1,23E-04	0,00E+00	8,75E-05	-1,68E-02
EP-marine	kg N eq.	8,93E-02	1,66E-03	0,00E+00	1,79E-03	-1,64E-02
EP-terrestrial	mol N eq.	8,10E-01	1,79E-02	0,00E+00	1,98E-02	-1,82E-01
POCP	kg NMVOC eq.	3,92E-01	5,39E-03	0,00E+00	7,28E-03	-7,58E-02
ADP-minerals&metals*	kg Sb eq.	5,54E-04	1,82E-06	0,00E+00	1,88E-06	-2,37E-04
ADP-fossil*	MJ	7,81E+02	1,59E+01	0,00E+00	1,75E+01	-1,45E+02
WDP	m^3	2,85E+01	2,29E-01	0,00E+00	2,13E-01	-3,31E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Use of resources

Results per functional or declared unit - 200mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
PERE	MJ	1,04E+02	3,00E-01	0,00E+00	1,87E-01	-1,53E+01
PERM	MJ	1,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,04E+02	3,00E-01	0,00E+00	1,87E-01	-1,53E+01
PENRE	MJ	1,37E+03	1,63E+01	0,00E+00	1,89E+01	-1,62E+02
PENRM	MJ.	8,84E+00	1,28E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,38E+03	1,76E+01	0,00E+00	1,89E+01	-1,62E+02
SM	kg	7,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	2,33E-02	0,00E+00

FW	m^3	4,48E+02	9,60E-01	0,00E+00	8,96E-01	-1,27E+02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Waste production and output flows

Waste production

Results per functional or declared unit - 200mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Hazardous waste disposed	kg	1,61E-03	1,14E-05	0,00E+00	1,06E-05	-1,09E-03
Non-hazardous waste disposed	kg	6,25E+00	1,17E+00	0,00E+00	1,85E+01	-6,06E+00
Radioactive waste disposed	kg	3,57E-03	9,52E-05	0,00E+00	1,20E-04	-3,12E-04

Output flows

Results per functional or declared unit - 200mm thickness						
Indicator	**Unit**	**A1-A3**	**A4-A5**	**B1-C1**	**C2-C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	9,61E+00	0,00E+00
Material for recycling	kg	1,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	9,61E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional unit - 200mm thickness		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	0,00E+00

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

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