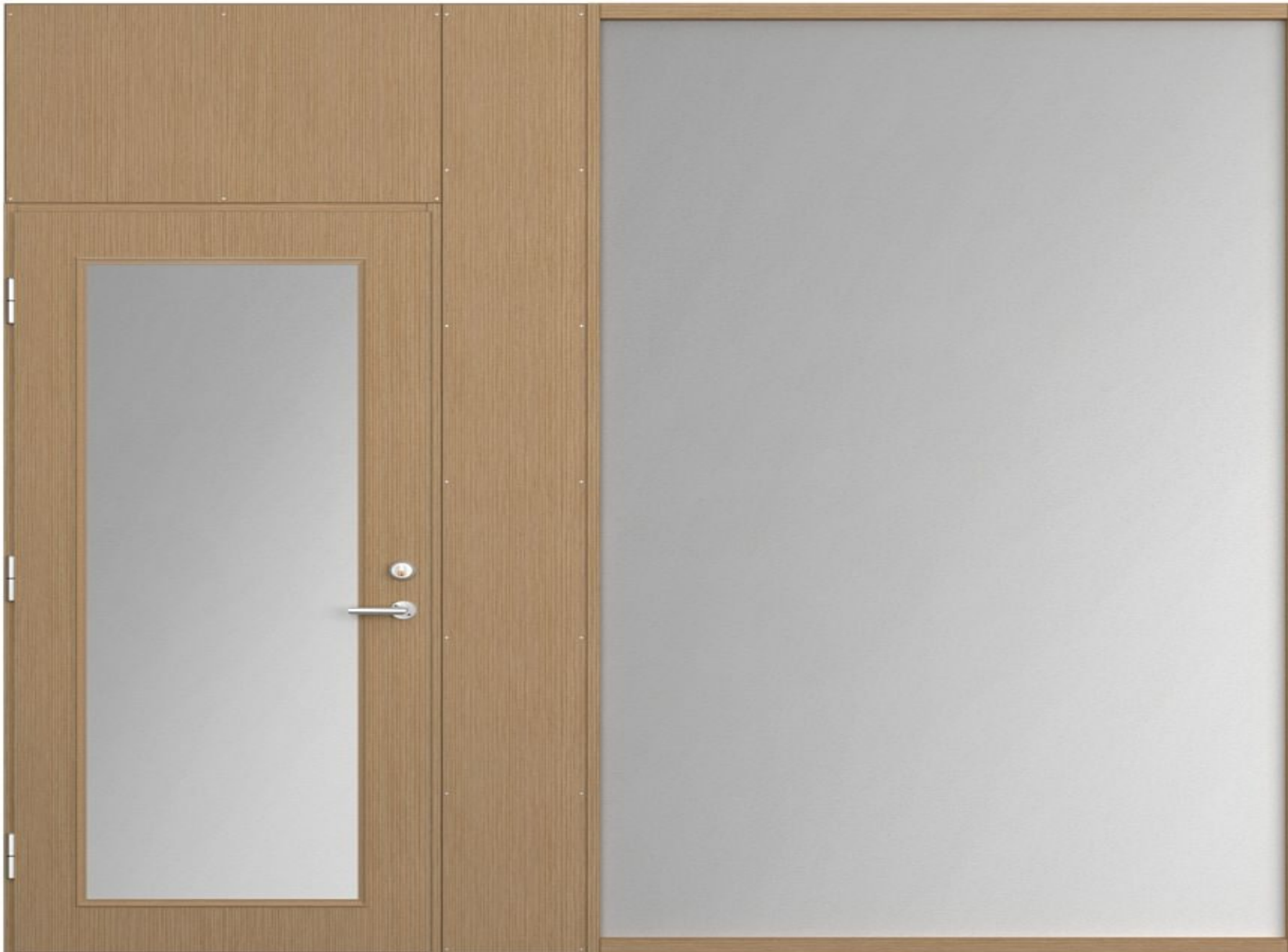


# ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025



Acoustic wood-and-glass partition walls  
Haapsalu Uksetehase AS

## **RTS\_443\_25**

Published on 4.12.2025, last updated on -, valid until 4.12.2030



EPD developed by **LCA SUPPORT**

## GENERAL INFORMATION

### MANUFACTURER

Manufacturer	Haapsalu Uksetehase AS
Address	Masti 8, Haapsalu, Estonia
Contact details	info@uksetehas.ee
Website	<a href="https://www.uksetehas.ee/">https://www.uksetehas.ee/</a>



Jukka Seppänen  
RTS EPD Committee Secretary



Laura Apilo  
Managing Director

### EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	Rakennustieto EPD
Address	Malminkatu 16 A, 00100 Helsinki
Website	<a href="https://ymparisto.rakennustieto.fi/en">https://ymparisto.rakennustieto.fi/en</a>
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	RTS PCR (12.11.2024) EN 17213 Windows and doors
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Mari-Liis Tommula, LCA Support
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Sigita Židonienė, Vesta Consulting, UAB

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

## PRODUCT

Product name	Acoustic wood-and-glass partition walls
Place(s) of raw material origin	Europe
Place of production	Masti 8, 90401 Uuemõisa, Läänemaa, Estonia
Place(s) of installation and use	Finland, Estonia
Period for data	01.01.2022-31.12.2022
Averaging in EPD	Multiple products

## DECLARED UNIT

Declared unit	1 square meter of partition wall based on 2650x2650 size wall		
Product group	Mass per declared unit, kg	Variation in GWP fossil for modules A1-A3	
<b>Acoustic wood-glass partition wall with Rw37dB door</b>	26,1	±2%	
<b>Acoustic wood-glass partition wall with Rw37dB glazed door</b>	25,76	±2%	

*The EPD results are specific to the declared partition wall size and are comparable only to partition walls of the same dimensions.*

# PRODUCT AND MANUFACTURER

## ABOUT THE MANUFACTURER

Haapsalu UkseteHAS is a door and door system manufacturer, specializing in the production of high-quality interior and exterior doors using modern manufacturing technologies and environmentally sustainable solutions. The company produces a comprehensive range of products including interior doors made from wood, MDF and laminate, exterior doors from wood, metal and composite materials, as well as fire-resistant and acoustic doors for various building types. The manufacturing process encompasses material preparation, framing, joining, finishing and hardware installation, all conducted under strict quality control measures.

## PRODUCT DESCRIPTION

Acoustic doors with glass partitions in wooden frames are intended for indoor use to close openings between compartments subject to increased soundproofing requirements. For use in heated offices and public buildings. The product is not suitable for humid and outdoor conditions, as well as between rooms with very different temperatures.

The acoustic partition wall system consists of four main components: an acoustic door (available as glazed or solid), an overpanel, an electrical module, and a glass panel. The electrical module is a hollow box on the lock side of the door with one removable side. Cables and electrical devices are installed on-site, as well as mineral or glass wool insulation, and are not included by the manufacturer.

Quality requirements follow RT 103755-et (2024) "Wooden doorsets" and SFS 4434:2022 (Class V) for veneered surface appearance.

Further information can be found at:  
<https://www.ukseteHAS.ee/>

Products are grouped as follows:

### 1. Acoustic Partition with Rw37dB Door:

Acoustic Partition with Rw37dB Door and Glass Module with Wooden Painted Frames  
 Acoustic Partition with Rw37dB Door and Glass Module with Wooden Veneered Frames - *reference product*

### 2. Acoustic Partition with Rw37dB Glazed Door:

Acoustic Partition with Rw37dB Glazed Door and Glass Module with Wooden Painted Frames  
 Acoustic Partition with Rw37dB Glazed Door and Glass Module with Wooden Veneered Frame - *reference product*

## PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %		Material origin
	Acoustic Partition with Rw37dB Door	Acoustic Partition with Rw37dB Glazed Door	
Metals, %	1,3	1,4	Europe
Minerals, %	40,3	52,3	Europe
Fossil materials, %	7,8	8,2	Global
Bio-based materials, %	56,9	44,5	Europe

### Product packaging composition

	Acoustic Partition with Rw37dB Door	Acoustic Partition with Rw37dB Glazed Door
Plastics (kg)	0,09	0,09
Cardboard (kg)	0,11	0,11
Wood (kg)	1,44	1,44
Metal (kg)	0,006	0,006
Total (kg)	1,64	1,64

### BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate.

	Acoustic Partition with Rw37dB Door	Acoustic Partition with Rw37dB Glazed Door
Biogenic carbon content in product, kg C	6,2	5,3
Biogenic carbon content in packaging, kg C	0,15	0,14

Note. 1 kg biogenic carbon is equivalent to 44/12 kg of biogenic CO<sub>2</sub>.

### SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).



Acoustic Partition With Rw37dB Door



Acoustic Partition With Rw37dB Glazed Door

# PRODUCT LIFE-CYCLE

## SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Cradle to gate with options, A4-A5, and modules C1-C4, D.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = ND.

## MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

The production process begins with determining the need of purchasable materials and hardware. Work orders with customized drawings will be initiated in different production units simultaneously, such as in glulam plant for door- frames and profiles for wood-glass partitions, thresholds etc. and pressing department for assembling the internal door frame with core materials. Door leaves are pressed in hot presses. When the bonded materials have been properly cured, CNC-machining will follow, whilst all the necessary machinings for hardware as well as glazing apertures are made. This is followed by edge-banding and intermediate quality control before the final finish. Water-based and UV curable waterborne topcoats are used for surface coatings. Before the final assembly, the quality of the finish will be checked and if everything meets the internal standards, mounting of hardware, sealings and glazings will commence. Before packaging, labelling and stacking for transport, operational checks for locking will be performed. Work order will be signed by the team member and archived, goods will be moved to the store for final packaging and strapping for the transport by trucks on to the construction site.

## TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

A4 is declared. Since 45% of the products are transported to Finland and the EPD is of interest mostly for Finnish customers, then the scenarios are developed based on Finnish data. It is assumed that the product is transported from the manufacturing site 110 km by truck and 118 km by ferry to Finland, Helsinki.

A5 is declared. No Product waste is generated during installation. It is assumed that the element will be installed without mechanical handling. Materials used in installation are excluded by cut-off. No water is needed for the installation process.

Packaging waste comes from the packaging used for the final products. For packaging, it is assumed that the wood is shredded, and plastic packaging is incinerated with energy recovery (Eurostat, 2023). Steel components are recovered from bottom ash following incineration and directed to recycling. Waste paperboard is assumed to be recycled, as the most common treatment option for paper waste in Finland, where approximately 54% of paper waste is recycled (Eurostat, 2024).

#### **PRODUCT USE AND MAINTENANCE (B1-B7)**

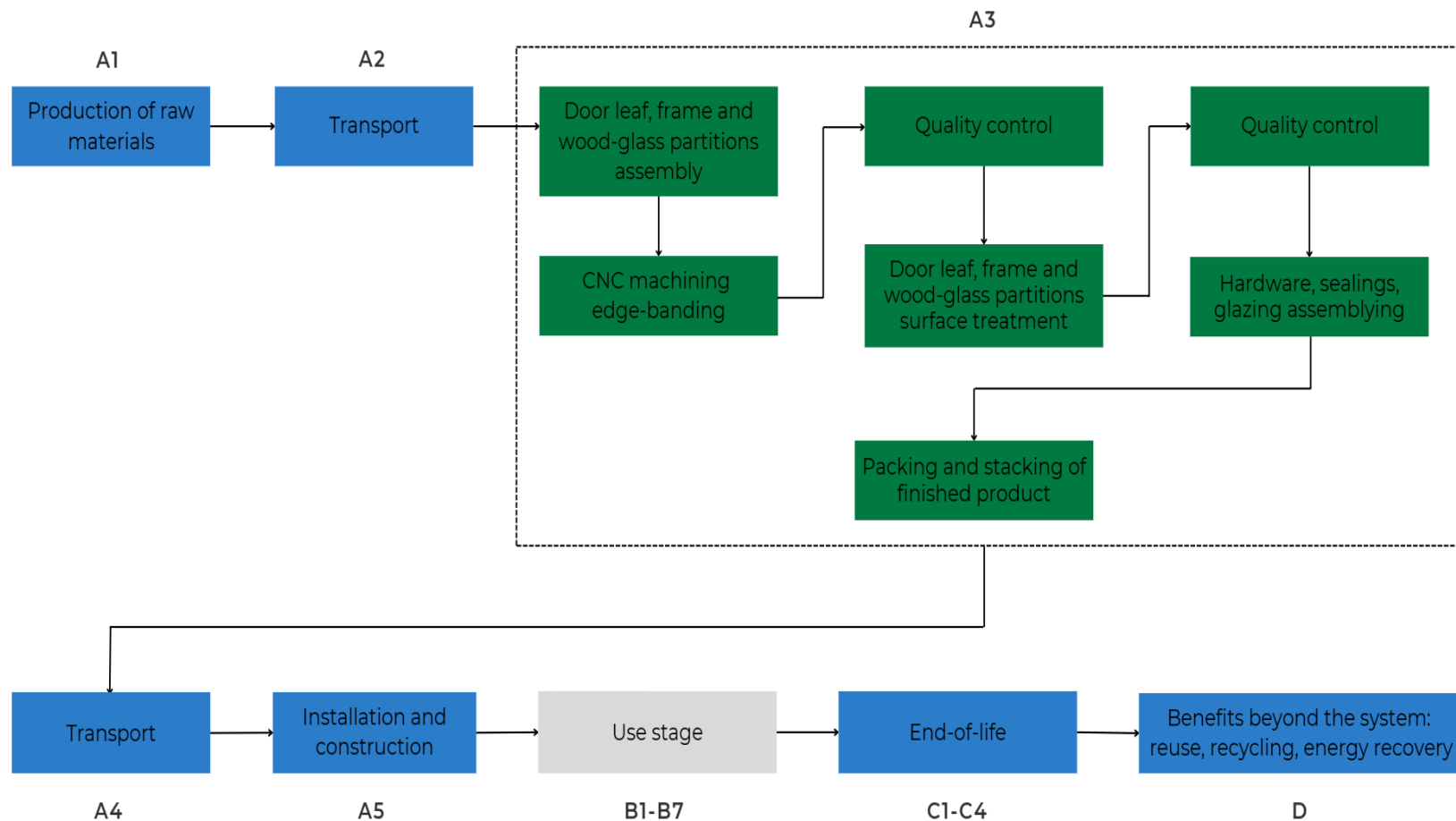
Not declared.

Air, soil, and water impacts during the use phase have not been studied.

#### **PRODUCT END OF LIFE (C1-C4, D)**

It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed to have the same weight as the declared product. The scenario is based on the scenario given by standard EN 17213. Transportation distance to the closest disposal area is estimated as 50 km and the method is assumed as lorry which is the most common option. It is assumed that the products are removed from the building without additional energy use. The end-of-life waste treatment scenario assumes that 95% of non-glazing materials are collected for waste treatment, with the remaining 5% sent to landfill. Collected wood-based materials in the product are assumed to be incinerated with energy recovery, while other non-glazing materials are assumed to be recycled. For glazing materials, 30% are directed to recycling and 70% to landfill.

## MANUFACTURING PROCESS



## LIFE-CYCLE ASSESSMENT

### CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

Cut-off has been applied in A3 to exclude solvents and A5 to exclude materials for installation.

### VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

Data collection for production, transport, and packaging was collected from the manufacturer via a questionnaire. The inventory and environmental data can be considered to be of good or very good quality.

### PRIMARY DATA

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that do not capture all relevant aspects of data quality. The indicator is not comparable across product categories.

Share of primary data of GWP-GHG results for A1-A3:

	Acoustic Partition with Rw37dB Door	Acoustic Partition with Rw37dB Glazed Door
Electricity, Estonia, 2022 (One Click LCA)	49%	47%

### ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	Allocated by production volume
Manufacturing energy and waste	Allocated by production volume

## PRODUCT & MANUFACTURING SITES GROUPING

All of the partition walls are manufactured on the same site. The products are grouped based on similarities in materials and so that total GWP fossil values vary less than 10%. Reference products are chosen by the worst-case scenario with the greatest total GWP fossil values.

## LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

## ENVIRONMENTAL IMPACT DATA - ACOUSTIC PARTITION WITH RW37DB DOOR

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

### CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total <sup>1)</sup>	kg CO <sub>2</sub> e	3,03E-01	1,17E+00	1,79E+01	1,94E+01	7,06E-01	6,03E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,41E-01	2,28E+01	1,25E+00	-3,35E+01
GWP – fossil	kg CO <sub>2</sub> e	2,57E+01	1,17E+00	1,53E+01	4,22E+01	7,06E-01	4,96E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,41E-01	1,48E+00	1,28E-01	-3,35E+01
GWP – biogenic	kg CO <sub>2</sub> e	-2,55E+01	4,38E-05	2,61E+00	-2,29E+01	1,25E-04	5,54E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,37E-05	2,13E+01	1,12E+00	0,00E+00
GWP – LULUC	kg CO <sub>2</sub> e	1,10E-01	5,22E-04	2,32E-02	1,34E-01	3,13E-04	2,04E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,30E-05	4,49E-04	5,77E-05	-3,61E-03
Ozone depletion pot.	kg CFC-11e	9,48E-07	1,74E-08	1,17E-07	1,08E-06	1,22E-08	4,39E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,08E-09	7,92E-09	2,39E-09	-4,92E-07
Acidification potential	mol H <sup>+</sup> e	1,97E-01	4,04E-03	1,03E-01	3,04E-01	1,23E-02	2,96E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,80E-04	3,77E-03	6,46E-04	-9,68E-02
EP-freshwater <sup>2)</sup>	kg Pe	6,84E-03	9,10E-05	3,08E-03	1,00E-02	3,32E-05	1,27E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,10E-05	2,10E-04	1,51E-05	-5,68E-03
EP-marine	kg Ne	3,95E-02	1,34E-03	2,04E-02	6,12E-02	3,12E-03	1,53E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,58E-04	1,68E-03	1,40E-03	-2,00E-02
EP-terrestrial	mol Ne	4,54E-01	1,45E-02	2,24E-01	6,93E-01	3,46E-02	1,39E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,72E-03	1,65E-02	2,67E-03	-2,16E-01
POCP (“smog”) <sup>3)</sup>	kg NMVOCe	1,46E-01	5,96E-03	6,28E-02	2,15E-01	1,01E-02	3,73E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,07E-04	4,57E-03	9,48E-04	-7,97E-02
ADP-minerals & metals <sup>4)</sup>	kg Sbe	3,58E-04	3,28E-06	2,09E-05	3,82E-04	1,25E-06	1,52E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,93E-07	1,35E-06	2,08E-07	-5,33E-05
ADP-fossil resources	MJ	3,90E+02	1,70E+01	1,71E+02	5,78E+02	9,52E+00	3,94E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,04E+00	6,99E+00	2,04E+00	-4,53E+02
Water use <sup>5)</sup>	m <sup>3</sup> e depr.	1,17E+01	8,39E-02	1,67E+02	1,79E+02	3,66E-02	5,04E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,01E-02	5,66E-01	9,69E-03	-2,60E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO<sub>4</sub>e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

## ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	2,85E-06	1,17E-07	7,86E-07	3,76E-06	4,21E-08	4,00E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,41E-08	4,60E-08	1,48E-08	-9,06E-07
Ionizing radiation <sup>6)</sup>	kBq 11235e	1,91E+00	1,50E-02	3,95E-01	2,32E+00	7,65E-03	9,89E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,78E-03	7,26E-02	1,87E-03	-2,27E+00
Ecotoxicity (freshwater)	CTUe	2,27E+02	2,41E+00	4,20E+01	2,72E+02	8,96E-01	2,44E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,89E-01	2,93E+00	2,02E+00	-6,67E+01
Human toxicity, cancer	CTUh	6,20E-08	1,97E-10	2,69E-09	6,49E-08	1,33E-10	5,22E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,32E-11	1,43E-09	2,70E-11	-1,33E-08
Human tox. non-cancer	CTUh	2,50E-07	1,10E-08	1,25E-07	3,86E-07	4,19E-09	3,07E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,32E-09	3,39E-08	1,61E-09	-1,31E-07
SQP <sup>7)</sup>	-	2,03E+03	1,70E+01	3,05E+02	2,35E+03	5,13E+00	2,89E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,06E+00	3,25E+00	4,80E+00	-4,51E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

## USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy <sup>8)</sup>	MJ	1,48E+02	2,35E-01	5,72E+01	2,06E+02	1,10E-01	-2,61E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,80E-02	-3,86E+02	-1,32E+01	-9,27E+00
Renew. PER as material	MJ	2,23E+02	0,00E+00	-2,30E+01	2,00E+02	0,00E+00	-4,86E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-1,85E+02	-9,76E+00	0,00E+00
Total use of renew. PER	MJ	3,71E+02	2,35E-01	3,42E+01	4,06E+02	1,10E-01	-3,10E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,80E-02	-5,71E+02	-2,29E+01	-9,27E+00
Non-re. PER as energy	MJ	3,51E+02	1,70E+01	1,57E+02	5,25E+02	9,52E+00	-3,56E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,04E+00	-5,27E-02	-1,39E+01	-4,53E+02
Non-re. PER as material	MJ	3,94E+01	0,00E+00	2,50E-01	3,96E+01	0,00E+00	-3,75E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-2,81E+01	-7,80E+00	0,00E+00
Total use of non-re. PER	MJ	3,90E+02	1,70E+01	1,57E+02	5,64E+02	9,52E+00	-7,30E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,04E+00	-2,81E+01	-2,17E+01	-4,53E+02
Secondary materials	kg	1,09E+00	7,24E-03	1,29E-01	1,23E+00	4,13E-03	8,89E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,69E-04	7,36E-03	7,44E-04	1,48E-01
Renew. secondary fuels	MJ	1,48E+01	9,16E-05	1,44E+01	2,93E+01	3,04E-05	4,59E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,10E-05	5,05E-05	1,39E-05	-1,93E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m <sup>3</sup>	3,01E-01	2,51E-03	1,75E-01	4,78E-01	1,00E-03	3,55E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,02E-04	4,18E-03	-3,06E-02	-1,71E-01

8) PER = Primary energy resources.

## END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,51E+00	2,87E-02	2,04E-01	1,74E+00	1,27E-02	1,08E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,46E-03	1,23E-01	3,65E-03	-1,79E+00
Non-hazardous waste	kg	6,70E+01	5,33E-01	2,80E+01	9,56E+01	2,15E-01	1,53E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,40E-02	1,79E+01	4,11E+01	-3,12E+01
Radioactive waste	kg	1,15E-03	3,68E-06	7,63E-05	1,23E-03	1,88E-06	2,50E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,35E-07	1,86E-05	4,59E-07	-5,59E-04

## END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	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	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,03E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	3,36E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	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	9,90E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	8,44E+01	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,98E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,69E+02	0,00E+00	0,00E+00

## ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>9)</sup>	kg CO <sub>2</sub> e	2,58E+01	1,17E+00	1,53E+01	4,23E+01	7,06E-01	4,96E-02	ND	ND	ND	ND	ND	ND	ND	s	1,41E-01	1,48E+00	1,28E-01	-3,35E+01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH<sub>4</sub> fossil, CH<sub>4</sub> biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO<sub>2</sub> is set to zero.

# ENVIRONMENTAL IMPACT DATA - ACOUSTIC PARTITION WITH RW37DB GLAZED DOOR

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

## CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total <sup>1)</sup>	kg CO <sub>2</sub> e	7,15E+00	5,24E-01	1,77E+01	2,54E+01	6,98E-01	5,81E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,39E-01	1,97E+01	1,10E+00	-2,85E+01
GWP – fossil	kg CO <sub>2</sub> e	2,89E+01	5,24E-01	1,52E+01	4,46E+01	6,97E-01	4,96E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,39E-01	1,77E+00	1,60E-01	-2,85E+01
GWP – biogenic	kg CO <sub>2</sub> e	-2,19E+01	5,48E-05	2,52E+00	-1,93E+01	1,24E-04	5,32E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,75E-05	1,79E+01	9,43E-01	0,00E+00
GWP – LULUC	kg CO <sub>2</sub> e	1,16E-01	2,30E-04	2,31E-02	1,40E-01	3,09E-04	2,04E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,23E-05	7,12E-04	7,15E-05	-3,32E-03
Ozone depletion pot.	kg CFC-11e	1,09E-06	7,95E-09	1,17E-07	1,21E-06	1,21E-08	4,39E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,05E-09	1,10E-08	2,96E-09	-4,27E-07
Acidification potential	mol H <sup>+</sup> e	2,27E-01	1,86E-03	1,03E-01	3,31E-01	1,22E-02	2,96E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,75E-04	4,23E-03	8,00E-04	-9,29E-02
EP-freshwater <sup>2)</sup>	kg Pe	7,22E-03	4,03E-05	3,06E-03	1,03E-02	3,28E-05	1,27E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,08E-05	2,67E-04	1,60E-05	-4,78E-03
EP-marine	kg Ne	4,43E-02	6,29E-04	2,03E-02	6,52E-02	3,08E-03	1,53E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,56E-04	1,71E-03	1,66E-03	-1,85E-02
EP-terrestrial	mol Ne	5,09E-01	6,85E-03	2,24E-01	7,40E-01	3,42E-02	1,39E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,70E-03	1,70E-02	3,31E-03	-2,04E-01
POCP (“smog”) <sup>3)</sup>	kg NMVOCe	1,60E-01	2,75E-03	6,27E-02	2,25E-01	9,93E-03	3,73E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,00E-04	4,98E-03	1,17E-03	-7,25E-02
ADP-minerals & metals <sup>4)</sup>	kg Sbe	3,84E-04	1,48E-06	2,12E-05	4,06E-04	1,23E-06	1,52E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,88E-07	1,85E-06	2,57E-07	-5,52E-05
ADP-fossil resources	MJ	4,36E+02	7,58E+00	1,71E+02	6,14E+02	9,40E+00	3,94E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,02E+00	1,00E+01	2,53E+00	-3,82E+02
Water use <sup>5)</sup>	m <sup>3</sup> e depr.	1,17E+01	3,74E-02	1,67E+02	1,79E+02	3,61E-02	5,04E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,98E-03	5,27E-01	1,20E-02	-2,47E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

## ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	3,13E-06	5,21E-08	7,85E-07	3,97E-06	4,16E-08	4,00E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,39E-08	5,37E-08	1,84E-08	-8,88E-07
Ionizing radiation <sup>6)</sup>	kBq U235e	1,98E+00	6,96E-03	3,94E-01	2,38E+00	7,55E-03	9,89E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,76E-03	1,23E-01	2,32E-03	-1,88E+00
Ecotoxicity (freshwater)	CTUe	2,48E+02	1,07E+00	4,13E+01	2,91E+02	8,85E-01	2,44E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,86E-01	3,33E+00	2,56E+00	-6,44E+01
Human toxicity, cancer	CTUh	4,85E-08	9,35E-11	2,62E-09	5,12E-08	1,31E-10	5,22E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,30E-11	1,43E-09	3,34E-11	-1,08E-08
Human tox. non-cancer	CTUh	2,58E-07	4,96E-09	1,24E-07	3,88E-07	4,14E-09	3,07E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,31E-09	3,01E-08	1,97E-09	-1,12E-07
SQP <sup>7)</sup>	-	2,02E+03	7,36E+00	3,01E+02	2,33E+03	5,06E+00	2,89E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,03E+00	4,87E+00	5,94E+00	-4,13E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

## USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy <sup>8)</sup>	MJ	1,90E+02	1,07E-01	5,79E+01	2,48E+02	1,09E-01	-2,61E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,77E-02	-4,41E+02	-1,03E+01	-8,43E+00
Renew. PER as material	MJ	1,98E+02	0,00E+00	-2,26E+01	1,75E+02	0,00E+00	-4,67E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-1,62E+02	-8,51E+00	0,00E+00
Total use of renew. PER	MJ	3,87E+02	1,07E-01	3,54E+01	4,23E+02	1,09E-01	-3,08E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,77E-02	-6,03E+02	-1,88E+01	-8,43E+00
Non-re. PER as energy	MJ	3,95E+02	7,58E+00	1,58E+02	5,61E+02	9,40E+00	-3,56E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,02E+00	8,09E-01	-1,80E+01	-3,82E+02
Non-re. PER as material	MJ	4,07E+01	0,00E+00	5,30E-01	4,12E+01	0,00E+00	-3,77E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-2,79E+01	-9,60E+00	0,00E+00
Total use of non-re. PER	MJ	4,36E+02	7,58E+00	1,58E+02	6,02E+02	9,40E+00	-7,33E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,02E+00	-2,71E+01	-2,76E+01	-3,82E+02
Secondary materials	kg	5,95E-01	3,23E-03	1,29E-01	7,26E-01	4,08E-03	8,89E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,60E-04	8,23E-03	9,22E-04	1,76E-01
Renew. secondary fuels	MJ	9,50E+00	4,04E-05	1,55E+01	2,50E+01	3,01E-05	4,59E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,09E-05	7,58E-05	1,73E-05	-2,39E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m <sup>3</sup>	3,04E-01	1,11E-03	1,75E-01	4,79E-01	9,90E-04	3,55E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,99E-04	5,00E-03	-3,80E-02	-1,47E-01

8) PER = Primary energy resources.

## END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,56E+00	1,26E-02	1,90E-01	1,76E+00	1,25E-02	1,08E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,42E-03	1,13E-01	4,53E-03	-1,51E+00
Non-hazardous waste	kg	7,42E+01	2,37E-01	2,78E+01	1,02E+02	2,13E-01	1,53E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,33E-02	1,61E+01	5,10E+01	-2,67E+01
Radioactive waste	kg	1,70E-03	1,71E-06	7,60E-05	1,77E-03	1,86E-06	2,50E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,31E-07	3,15E-05	5,67E-07	-4,62E-04

## END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	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	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,03E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	4,23E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	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	9,90E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	8,44E+01	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,98E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,69E+02	0,00E+00	0,00E+00

## ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>9)</sup>	kg CO <sub>2</sub> e	2,90E+01	5,24E-01	1,52E+01	4,47E+01	6,97E-01	4,96E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,39E-01	1,77E+00	1,60E-01	-2,85E+01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH<sub>4</sub> fossil, CH<sub>4</sub> biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO<sub>2</sub> is set to zero.

## SCENARIO DOCUMENTATION

### Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity, Estonia, 2022 (One Click LCA, residual mix)
Electricity kgCO <sub>2</sub> e / kWh	0,99
District heating data source and quality	Heat production, wood chips from industry, at furnace 1000kW, state-of-the-art 2014
District heating CO <sub>2</sub> e / kWh	0,0025 (ecoinvent 3.10.1)

### Transport scenario documentation - A4

Scenario parameter	Value
Fuel and vehicle type. Eg, electric truck, diesel powered truck	diesel powered truck and ferry
Average transport distance, km	truck      110 ferry      118
Capacity utilization (including empty return) %	100
Bulk density of transported products	644 kg/m <sup>3</sup>
Volume capacity utilization factor	<1

### Installation scenario documentation - A5

Scenario information	Acoustic Partition with Rw37dB Door	Acoustic Partition with Rw37dB Glazed Door
Ancillary materials for installation (specified by material) / kg or other units as appropriate	0	0
Water use / m <sup>3</sup>	0	0
Other resource use / kg	0	0
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	0	0
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	0	0
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	1,64	1,64

**End of life scenario documentation**

Scenario information	Acoustic Partition with Rw37dB Door	Acoustic Partition with Rw37dB Glazed Door
Collection process – kg collected separately	26,1	25,76
Collection process – kg collected with mixed construction waste	0	0
Recovery process – kg for re-use	0	0
Recovery process – kg for recycling	3,3	4,2
Recovery process – kg for energy recovery	14,5	11,33
Disposal (total) – kg for final deposition	8,3	10,23
Scenario assumptions e.g. transportation	Transported 50 km with lorry	

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