

Data quality:

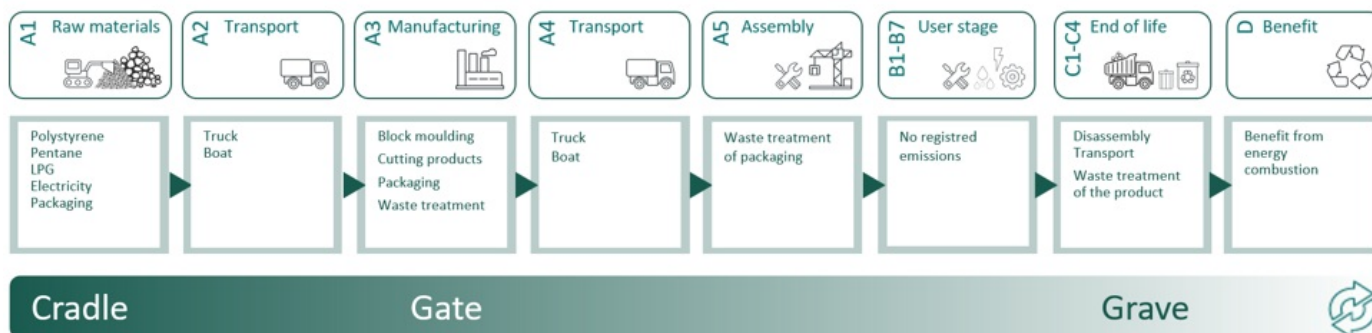
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Packaging - Plastic	ecoinvent 3.6	Database	2019
Packaging - Wood	ecoinvent 3.6	Database	2019
Plastic - Polystyrene expandable (EPS)	Plastics Europe + ecoinvent 3.6	European average.	2019

System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage			Construction installation stage		Use stage								End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction 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	
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X	

System boundary:



Kvalitet	100 mm	200 mm	Kubikk
70 kPa uten fiberduk	2,50	5,00	25,00
70 kPa med fiberduk	2,76	5,51	-
100 kPa uten fiberduk	2,72	5,44	27,22
100 kPa med fiberduk	2,99	5,98	-

Additional technical information:

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact												
Indicator	Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D	
GWP-total	kg CO ₂ -eq	1,62E+00	5,38E-02	4,30E-01	5,92E-02	1,28E-03	0,00E+00	5,24E-03	2,23E+00	1,09E-04	-1,28E-01	
GWP-fossil	kg CO ₂ -eq	1,63E+00	5,37E-02	4,27E-01	5,91E-02	1,28E-03	0,00E+00	5,23E-03	2,23E+00	1,09E-04	-1,23E-01	
GWP-biogenic	kg CO ₂ -eq	-1,06E-02	2,29E-05	2,23E-03	2,45E-05	1,64E-06	0,00E+00	2,24E-06	1,54E-05	5,77E-08	-7,50E-05	
GWP-luluc	kg CO ₂ -eq	3,96E-04	1,65E-05	7,29E-05	2,10E-05	1,53E-07	0,00E+00	1,59E-06	2,44E-06	1,67E-08	-4,46E-03	
ODP	kg CFC11-eq	1,32E-09	1,29E-08	8,22E-08	1,34E-08	1,07E-10	0,00E+00	1,26E-09	1,60E-09	1,20E-11	-9,49E-03	
AP	mol H ⁺ -eq	2,91E-03	1,89E-04	1,26E-03	1,70E-04	3,68E-06	0,00E+00	1,68E-05	2,65E-04	3,83E-07	-1,02E-03	
EP-FreshWater	kg P -eq	7,03E-06	4,25E-07	2,23E-06	4,72E-07	5,70E-09	0,00E+00	4,16E-08	1,58E-07	1,47E-09	-1,11E-05	
EP-Marine	kg N -eq	7,72E-04	4,19E-05	3,16E-04	3,36E-05	2,16E-06	0,00E+00	3,69E-06	1,28E-04	1,20E-07	-3,45E-04	
EP-Terrestrial	mol N -eq	8,39E-03	4,67E-04	3,45E-03	3,76E-04	1,57E-05	0,00E+00	4,11E-05	1,37E-03	1,36E-06	-3,72E-03	
POCP	kg NMVOC-eq	3,67E-03	1,77E-04	1,03E-02	1,44E-04	4,34E-06	0,00E+00	1,62E-05	3,28E-04	3,75E-07	-1,03E-03	
ADP-minerals&metals ¹	kg Sb -eq	7,51E-07	9,51E-07	9,53E-07	1,63E-06	1,02E-08	0,00E+00	9,32E-08	6,89E-08	6,09E-10	-7,73E-07	
ADP-fossil ¹	MJ	5,54E+01	8,71E-01	5,49E+00	8,94E-01	7,62E-03	0,00E+00	8,50E-02	1,37E-01	9,89E-04	-1,77E+00	
WDP ¹	m ³	1,70E+00	6,64E-01	2,20E+01	8,64E-01	1,97E-02	0,00E+00	6,52E-02	3,03E-01	1,02E-02	-6,50E+00	

GWP total Global Warming Potential total; GWP fossil Global Warming Potential fossil fuels ; GWP biogenic Global Warming Potential biogenic; GWP luluc Global Warming Potential land use change; ODP Ozone Depletion; AP Acidification; EP freshwater Eutrophication aquatic freshwater; EP marine Eutrophication aquatic marine; EP terrestrial Eutrophication terrestrial ;POCP Photochemical zone formation; ADPE Abiotic Depletion Potential minerals and metals; ADPf Abiotic Depletion Potential fossil fuels;

"Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009"

*INA Indicator Not Assessed

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

Remarks to environmental impacts

Additional environmental impact indicators												
Indicator	Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D	
PM	Disease incidence	2,27E-08	4,90E-09	1,41E-08	3,62E-09	5,10E-11	0,00E+00	4,81E-10	1,12E-09	5,00E-12	-6,46E-08	
IRP ²	kgBq U235 -eq	3,53E-02	3,81E-03	2,43E-02	3,91E-03	3,12E-05	0,00E+00	3,71E-04	2,29E-04	4,69E-06	-1,02E-02	
ETP-fw ¹	CTUe	2,64E+02	6,36E-01	3,39E+00	6,62E-01	7,94E-03	0,00E+00	6,21E-02	3,30E-01	1,82E-03	-9,70E+00	
HTP-c ¹	CTUh	6,37E-10	0,00E+00	1,45E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,40E-11	0,00E+00	-1,65E-10	
HTP-nc ¹	CTUh	2,83E-08	6,15E-10	4,36E-09	7,24E-10	2,60E-11	0,00E+00	6,00E-11	3,71E-09	3,00E-12	-9,22E-09	
SQP ¹	dimensionless	2,11E+00	9,91E-01	7,80E-01	6,25E-01	8,99E-03	0,00E+00	9,74E-02	1,63E-02	2,73E-03	-1,24E+01	

PM Particulate Matter emissions; IRP Ionizing radiation – human health; ETP-fw Eco toxicity – freshwater; HTP-c Human toxicity – cancer effects; HTP-nc Human toxicity – non cancer effects; SQP Soil Quality (dimensionless)

"Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009"

*INA Indicator Not Assessed




1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. 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.

Resource use												
Indicator	Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D	
PERE	MJ	2,47E-01	1,09E-02	1,56E+00	1,28E-02	1,75E-04	0,00E+00	1,07E-03	3,94E-03	5,77E-05	-1,03E+01	
PERM	MJ	1,60E-01	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	
PERT	MJ	4,07E-01	1,09E-02	1,56E+00	1,28E-02	1,75E-04	0,00E+00	1,07E-03	3,93E-03	5,76E-05	-1,03E+01	
PENRE	MJ	3,60E+01	8,71E-01	5,49E+00	8,94E-01	7,62E-03	0,00E+00	8,50E-02	1,37E-01	9,89E-04	-1,77E+00	
PENRM	MJ	2,31E+01	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	
PENRT	MJ	5,91E+01	8,71E-01	5,49E+00	8,94E-01	7,62E-03	0,00E+00	8,50E-02	1,37E-01	9,89E-04	-1,81E+00	
SM	kg	2,43E-04	0,00E+00	2,90E-03	0,00E+00	3,74E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	
RSF	MJ	5,08E-03	3,81E-04	2,16E-03	4,58E-04	4,82E-06	0,00E+00	3,74E-05	1,10E-04	1,43E-06	-1,04E-03	
NRSF	MJ	4,18E-04	1,26E-03	1,48E-02	1,64E-03	3,17E-05	0,00E+00	1,25E-04	0,00E+00	2,28E-04	-6,80E-01	
FW	m ³	4,61E-02	9,86E-05	1,42E-02	9,56E-05	4,75E-06	0,00E+00	9,67E-06	3,87E-04	9,09E-07	-4,59E-03	

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 resources; SM Use of secondary materials; RSF Use of renewable secondary fuels; NRSF Use of non renewable secondary fuels; FW Use of net fresh water

"Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009"






*INA Indicator Not Assessed

End of life - Waste												
Indicator	Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D	
	HWD	kg	2,27E-03	4,75E-05	3,76E-03	4,61E-05	1,20E-04	0,00E+00	4,65E-06	0,00E+00	1,80E-03	-2,61E-05
	NHWD	kg	3,58E-02	7,51E-02	2,23E-02	4,35E-02	6,25E-03	0,00E+00	7,39E-03	0,00E+00	8,94E-04	-3,66E-02
	RWD	kg	1,53E-06	5,95E-06	3,68E-05	6,09E-06	4,66E-08	0,00E+00	5,80E-07	0,00E+00	5,97E-09	-8,90E-06

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed;

*Reading example: 9,0 E-03 = $9,0 \cdot 10^{-3} = 0,009$

*INA Indicator Not Assessed

End of life - Output flow												
Indicator	Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D	
	CRU	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	0,00E+00	0,00E+00
	MFR	kg	6,48E-05	0,00E+00	1,49E-02	0,00E+00	6,23E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MER	kg	1,54E-05	0,00E+00	9,09E-06	0,00E+00	5,18E-08	0,00E+00	0,00E+00	7,00E-01	0,00E+00	0,00E+00
	EEE	MJ	2,91E-04	0,00E+00	1,17E-02	0,00E+00	8,07E-03	0,00E+00	0,00E+00	1,23E+00	0,00E+00	0,00E+00
	EET	MJ	4,41E-03	0,00E+00	1,77E-01	0,00E+00	1,22E-01	0,00E+00	0,00E+00	1,87E+01	0,00E+00	0,00E+00

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported energy Thermal

*Reading example: 9,0 E-03 = $9,0 \cdot 10^{-3} = 0,009$

*INA Indicator Not Assessed

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in accompanying packaging	kg C	4,75E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Additional Norwegian requirements

Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Data source	Amount	Unit
Electricity, Norway (kWh)	ecoinvent 3.6	21,18	g CO ₂ -eq/kWh

Dangerous substances

The product contains no substances given by the REACH Candidate list or the Norwegian priority list.

Indoor environment

Additional Environmental Information

Environmental impact indicators EN 15804+A1 and NPCR Part A v2.0											
Indicator	Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq	3,61E-02	5,32E-02	4,24E-01	5,85E-02	1,10E-03	0,00E+00	5,18E-03	2,23E+00	1,13E-04	-1,26E-01
ODP	kg CFC11 -eq	1,34E-09	1,05E-08	6,57E-08	1,09E-08	8,70E-11	0,00E+00	1,02E-09	1,44E-09	1,00E-11	-1,31E-08
POCP	kg C ₂ H ₄ -eq	1,87E-05	6,87E-06	9,25E-03	7,15E-06	1,87E-07	0,00E+00	6,41E-07	2,90E-06	1,29E-08	-1,54E-04
AP	kg SO ₂ -eq	1,34E-04	1,25E-04	9,78E-04	1,17E-04	2,08E-06	0,00E+00	1,09E-05	1,84E-04	2,00E-07	-7,49E-04
EP	kg PO ₄ ³⁻ -eq	1,46E-05	1,36E-05	1,38E-04	1,24E-05	8,49E-07	0,00E+00	1,18E-06	5,96E-05	2,71E-08	-2,23E-04
ADPM	kg Sb -eq	3,70E-07	9,51E-07	9,53E-07	1,63E-06	1,02E-08	0,00E+00	9,32E-08	6,89E-08	6,09E-10	-7,75E-07
ADPE	MJ	9,73E-01	8,55E-01	5,49E+00	8,75E-01	7,40E-03	0,00E+00	8,34E-02	1,37E-01	9,89E-04	-1,46E+00
GWPIOBC	kg CO ₂ -eq	3,82E-02	5,38E-02	4,13E-01	5,91E-02	0,00E+00	0,00E+00	5,24E-03	2,23E+00	1,13E-04	-1,26E-01

GWP Global warming potential; ODP Depletion potential of the stratospheric ozone layer; POCP Formation potential of tropospheric photochemical oxidants; AP Acidification potential of land and water; EP Eutrophication potential; ADPM Abiotic depletion potential for non fossil resources; ADPE Abiotic depletion potential for fossil resources; GWP-I/OBC/GHG Global warming potential calculated according to the principle of instantaneous oxidation (except emissions and uptake of biogenic carbon)

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