

Environmental product declaration

In accordance with 14025 and EN15804+A2

NKT instal PLUS YDYpzo 450/750 3x2,5



The Norwegian EPD Foundation

Owner of the declaration:

NKT A/S

Product:

NKT instal PLUS YDYpzo 450/750 3x2,5

Declared unit:

1 m

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR

NPCR 027 Part B for Electrical cables and wires

Program operator:

The Norwegian EPD Foundation

Declaration number:

NEPD-4395-3618-EN

Registration number:

NEPD-4395-3618-EN

Issue date: 21.04.2023

Valid to: 21.04.2028

EPD Software:

LCA.no EPD generator ID: 58718

General information

Product

NKT instal PLUS YDYpzo 450/750 3x2,5

Program operator:

Post Box 5250 Majorstuen, 0303 Oslo, Norway
The Norwegian EPD Foundation
Phone: +47 23 08 80 00
web: post@epd-norge.no

Declaration number: NEPD-4395-618-EN

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 027 Part B for Electrical cables and wires

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. EPD Norway shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Declared unit:

1 m NKT instal PLUS YDYpzo 450/750 3x2,5

Declared unit with option:

A1,A2,A3,A4,A5,C1,C2,C3,C4,D

Functional unit:

1 m of NKT instal PLUS YDYpzo 450/750 3x2,5 installed electrical cable used to transmit a reference electric current of 1A over 30 years, including waste treatment at end-of-life.

General information on verification of EPD from EPD tools:

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Individual third party verification of each EPD is not required when the EPD tool is integrated into the company's environmental management system, if the procedures for use of the EPD tool are approved by EPD Norway, and if the process is reviewed annually. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools.

Verification of EPD tool:

Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPD Norway's procedures and guidelines for verification and approval of EPD tools. Approval number: NEPDT32.

Third party verifier:

Vito D'Incognito - Take Care International
(no signature required)

Owner of the declaration:

NKT A/S
Contact person: Matheo Roehr
Phone:
e-mail: matheo.roehr@nkt.com

Manufacturer:

NKT S.A.
ul. Gajowa No. 3
PL-43-254 Warszowice, Poland

Place of production:

NKT production site Warszowice (Poland)
ul. Gajowa No. 3
PL-43-254 Warszowice, Poland

Management system:

ISO 9001, ISO 14001

Organisation no:

957 338 690

Issue date: 21.04.2023

Valid to: 21.04.2028

Year of study:

2021

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

Development and verification of EPD:

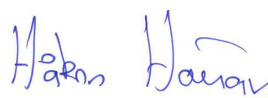
The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD Norway.

Approval number:

Developer of EPD: Ann Aittamaa

Reviewer of company-specific input data and EPD: Matheo Roehr

Approved:



Håkon Hauan
Managing Director of EPD-Norway

Product

Product description:

Cables are designed for fixed installation, indoors, in air, in and under plaster. Installation of the product should only be carried out by personnel trained and qualified for electrical works. The product is designed according to recognized standards. Applicable rules of installation must be applied at all times.

Product specification

Conductor: Copper conductor class 1

Insulation: PVC insulation

Sheath: PVC outer sheath

Materials	kg	%
Metal - Copper	0,06	45,71
Plastic - Polyvinyl chloride (PVC)	0,07	54,29
Total	0,14	

Technical data:

NKT instal PLUS YDYpzo 450/750 V

Standards applied: PN-E-90068

Rated voltage: 450/750 V

Test voltage: 2,5 kV

Maximum short circuit temperature: +160°C

Minimum temperature during installation: -5°C

Maximum conductor temperature: +70°C

Minimum bending radius: 4d (smaller cable dimension)

Fire class: Eca

Fulfills the low voltage directive (only for LV): YES

Market:

Poland

Reference service life, product

30 years. As defined in appendix 1 of the PEP Ecopassport PSR.

Reference service life, building or construction works

30 years.

LCA: Calculation rules

Declared unit:

1 m NKT instal PLUS YDYpzo 450/750 3x2,5

Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

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.

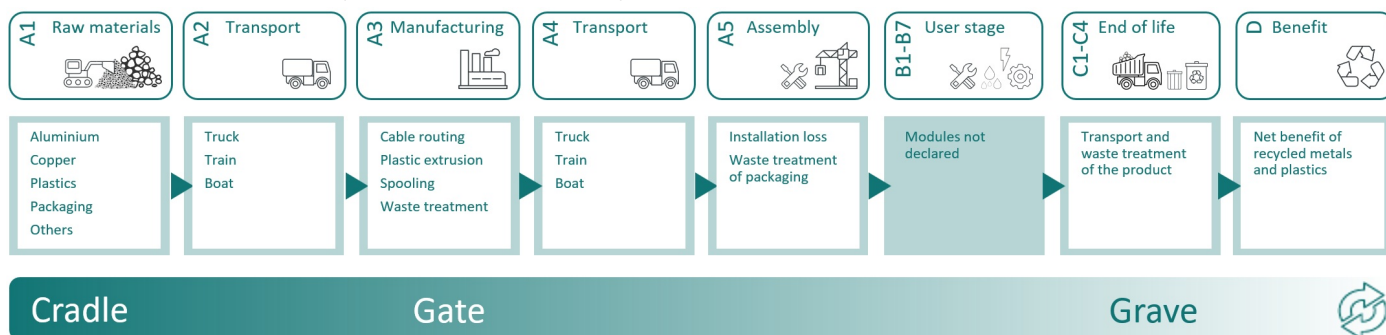
Materials	Source	Data quality	Year
Metal - Copper	ecoinvent 3.6	Database	2019
Plastic - Polyvinyl chloride (PVC)	ecoinvent 3.6	Database	2019

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:

The flowchart below illustrates the system boundaries of the analysis:



Additional technical information:

The reference product NKT instal PLUS YDYpzo 450/750 3x2,5 represents the entire product family. Please contact us for a specific EPD of another cable in the product family:

- NKT instal YDYpzo 450/750 3x1,5 white 172153001
- NKT instal YDYpzo 450/750 3x2,5 white 172153002
- NKT instal YDYp 450/750 2x4 white 172153003
- NKT instal YDYp 450/750 2x6 white 172153004
- NKT instal YDYpzo 450/750 4x1 white 172153005
- NKT instal YDYp 450/750 4x4 white 172153006
- NKT instal YDYpzo 450/750 5x1 white 172153007
- NKT instal YDYpzo 450/750 5x1 white 172153007C0100
- NKT instal YDYpzo 450/750 5x1,5 white 172153008
- NKT instal YDYp 450/750 2x10 white 172153009
- NKT instal YDYp 450/750 2x10 white 172153009C0100
- NKT instal YDYp 450/750 2x1 white 172153010C0050
- NKT instal YDYp 450/750 2x1 white 172153010C0100
- NKT instal YDYp 450/750 2x1 white 172153010S0500
- NKT instal YDYp 450/750 2x1,5 white 172153011C0050
- NKT instal YDYp 450/750 2x1,5 white 172153011C0100
- NKT instal YDYp 450/750 2x1,5 white 172153011Q0750
- NKT instal YDYp 450/750 2x1,5 white 172153011S0500
- NKT instal YDYp 450/750 2x2,5 white 172153012C0100
- NKT instal YDYp 450/750 2x2,5 white 172153012S0500
- NKT instal YDYpzo 450/750 3x1 white 172153013C0050
- NKT instal YDYpzo 450/750 3x1 white 172153013C0100
- NKT instal YDYpzo 450/750 3x1 white 172153013S0500
- NKT instal YDYpzo 450/750 4x1,5 white 172153014C0050
- NKT instal YDYpzo 450/750 4x1,5 white 172153014C0100
- NKT instal YDYpzo 450/750 4x1,5 white 172153014Q0450
- NKT instal YDYpzo 450/750 4x1,5 white 172153014S0500
- NKT instal YDYpzo 450/750 4x1,5 white 172153014S1000
- NKT instal YDYpzo 450/750 3x4 white 172153015C0050
- NKT instal YDYpzo 450/750 3x4 white 172153015C0100
- NKT instal YDYpzo 450/750 3x4 white 172153015S0500
- NKT instal YDYpzo 450/750 3x6 white 172153016C0050
- NKT instal YDYpzo 450/750 3x6 white 172153016C0100
- NKT instal YDYpzo 450/750 3x6 white 172153016S0500
- NKT instal lumen YDYpzo 450/750 4x1,5 172153017C0050

NKT instal lumen YDYpzo 450/750 4x1,5 172153017C0100
NKT instal lumen YDYpzo 450/750 4x1,5 172153017Q0450
NKT instal lumen YDYpzo 450/750 4x1,5 172153017S0500
NKT instal YDYpzo 450/750 5x1,5 white 172153018C0050
NKT instal YDYpzo 450/750 5x1,5 white 172153018C0100
NKT instal YDYpzo 450/750 5x1,5 white 172153018Q0400
NKT instal YDYpzo 450/750 5x1,5 white 172153018S0500
NKT instal YDYpzo 450/750 5x1,5 white 172153018S1000
NKT instal YDYpzo 450/750 5x2,5 white 172153019C0050
NKT instal YDYpzo 450/750 5x2,5 white 172153019C0100
NKT instal YDYpzo 450/750 5x2,5 white 172153019D0500
NKT instal YDYpzo 450/750 5x2,5 white 172153019D1000
NKT instal YDYpzo 450/750 5x2,5 white 172153019Q0350
NKT instal YDYpzo 450/750 5x4 white 172153020C0050
NKT instal YDYpzo 450/750 5x4 white 172153020C0100
NKT instal YDYpzo 450/750 5x4 white 172153020D0500
NKT instal YDYpzo 450/750 5x4 white 172153020D1000
NKT instal YDYpzo 450/750 4x2,5 white 172153021C0050
NKT instal YDYpzo 450/750 4x2,5 white 172153021C0100
NKT instal YDYpzo 450/750 4x2,5 white 172153021Q0400
NKT instal YDYpzo 450/750 4x2,5 white 172153021S0500
NKT instal YDYpzo 450/750 4x2,5 white 172153021S1000
NKT instal YDYp 450/750 3x1,5 (AG,AW,AV) 172153022C0100
NKT instal YDYpzo 450/750 5x6 white 172153023
NKT instal YDYpzo 450/750 5x6 white 172153023C0050
NKT instal YDYpzo 450/750 5x6 white 172153023C0100
NKT instal YDYpzo 450/750 5x6 white 172153023D0500
NKT instal YDYpzo 450/750 5x6 white 172153023D1000
NKT instal YDYp 450/750 3x1,5 (AT,AW,AG) 172153024C0100
NKT instal YDYpzo 450/750 5x10 white 172153025
NKT instal YDYpzo 450/750 5x10 white 172153025D0500
NKT instal YDYpzo 450/750 5x10 white 172153025S0200

LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

Module A4 = An average distance between the factory and the market is considered.

Modules A5 = 2 % product losses during installation are estimated by the company. No energy use for installation has been quantified since this operation is assumed to be done with other products and should be assessed at a construction works level. Cable drums are reused and assumed under the cut-off criterion of 1%.

Module C1 = For both buildings and construction works, cables will be taken out as part of a larger demolition. The energy use for cable removal compared to other heavier materials is assumed to be low. This module can therefore be included with zero impact.

Module C2 = An average distance between the market and the waste treatment facility is considered.

Modules C3 and C4 = Waste treatment of the product follows the default values provided in EN 50693, Product Category Rules for life cycle assessments of electronic and electrical products and systems, table G.4. This table specified how different types of raw materials used in A1 will likely be treated during the end-of-life of the product. Waste treatments in C3 include material recycling and incineration with and without energy recovery and fly ash extraction. Disposal in C4 consist of landfilling of different waste fractions and of ashes.

Module D = The recyclability of metals and plastics allows the producers a credit for the net scrap that is produced at the end of a product's life. The benefits from recycling of net scrap are described in formula from EN 15804:2012+A2:2019. Substitution of heat and electricity generated by the incineration with energy recovery of plastic insulation and other parts is also calculated in module D.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 6 (km)	53,3 %	320	0,023	l/tkm	7,36
Assembly (A5)		Unit	Value		
Product loss during installation (percentage of cable)	Units/DU	0,02			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 6 (km)	53,3 %	300	0,023	l/tkm	6,90
Waste processing (C3)		Unit	Value		
Copper to recycling (kg)	kg	0,04			
Waste treatment of polyvinylchloride (PVC), incineration with energy recovery and fly ash extraction (kg)	kg	0,04			
Disposal (C4)		Unit	Value		
Landfilling of ashes from incineration of Polyvinylchloride (PVC), process per kg ashes and residues (kg)	kg	0,01			
Landfilling of copper (kg)	kg	0,02			
Landfilling of plastic mixture (kg)	kg	0,04			
Benefits and loads beyond the system boundaries (D)		Unit	Value		
Substitution of electricity, in Norway (MJ)	MJ	0,04			
Substitution of primary copper with net scrap (kg)	kg	0,03			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	0,57			

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	4,62E-01	5,65E-03	5,75E-03	3,82E-03	1,12E-02	0	3,58E-03	7,42E-02	5,98E-03	-7,08E-02	
GWP-fossil	kg CO ₂ -eq	4,56E-01	5,64E-03	5,25E-03	3,82E-03	1,11E-02	0	3,58E-03	7,41E-02	5,98E-03	-7,03E-02	
GWP-biogenic	kg CO ₂ -eq	6,24E-03	2,42E-06	4,66E-04	1,64E-06	1,35E-04	0	1,53E-06	3,02E-05	1,05E-06	-3,18E-04	
GWP-luluc	kg CO ₂ -eq	4,22E-04	1,72E-06	3,42E-05	1,16E-06	9,32E-06	0	1,09E-06	5,79E-06	3,92E-07	-1,85E-04	
ODP	kg CFC11-eq	1,12E-07	1,36E-09	1,03E-09	9,21E-10	2,39E-09	0	8,63E-10	2,44E-09	3,06E-10	-2,42E-04	
AP	mol H ⁺ -eq	1,43E-02	1,82E-05	1,02E-04	1,23E-05	2,90E-04	0	1,15E-05	4,29E-05	9,51E-06	-1,13E-02	
EP-FreshWater	kg P -eq	1,16E-04	4,49E-08	3,11E-07	3,04E-08	2,33E-06	0	2,85E-08	2,18E-07	3,02E-08	-7,61E-05	
EP-Marine	kg N -eq	1,06E-03	3,98E-06	3,09E-05	2,69E-06	2,24E-05	0	2,52E-06	1,05E-05	7,53E-06	-4,71E-04	
EP-Terrestrial	mol N -eq	1,51E-02	4,44E-05	4,87E-04	3,00E-05	3,17E-04	0	2,82E-05	1,12E-04	3,56E-05	-7,26E-03	
POCP	kg NMVOC-eq	3,80E-03	1,74E-05	8,78E-05	1,18E-05	7,95E-05	0	1,11E-05	3,18E-05	1,08E-05	-1,97E-03	
ADP-minerals&metals ¹	kg Sb -eq	1,34E-04	1,01E-07	4,65E-08	6,80E-08	2,68E-06	0	6,38E-08	1,56E-07	9,91E-09	-6,31E-05	
ADP-fossil ¹	MJ	7,59E+00	9,17E-02	4,90E-02	6,20E-02	1,60E-01	0	5,81E-02	9,75E-02	2,54E-02	-6,46E-01	
WDP ¹	m ³	2,15E+01	7,03E-02	3,72E-02	4,76E-02	4,82E-01	0	4,46E-02	1,99E+00	4,32E-01	3,08E+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	4,39E-08	5,19E-10	1,42E-09	3,51E-10	9,39E-10	0	3,29E-10	2,79E-10	1,42E-10	-2,42E-08	
 IRP ²	kgBq U235 -eq	2,24E-02	4,01E-04	1,80E-04	2,71E-04	4,81E-04	0	2,54E-04	4,74E-04	1,42E-04	-1,05E-03	
 ETP-fw ¹	CTUe	1,71E+02	6,70E-02	9,12E-01	4,53E-02	3,85E+00	0	4,25E-02	4,67E+00	1,55E+01	-1,04E+02	
 HTP-c ¹	CTUh	3,16E-09	0,00E+00	1,10E-11	0,00E+00	6,40E-11	0	0,00E+00	1,00E-11	2,00E-12	-1,47E-09	
 HTP-nc ¹	CTUh	2,34E-07	6,50E-11	3,11E-10	4,40E-11	4,72E-09	0	4,10E-11	1,10E-09	6,80E-11	-1,25E-07	
 SQP ¹	dimensionless	3,65E+00	1,05E-01	3,68E+00	7,11E-02	1,54E-01	0	6,67E-02	3,55E-02	7,46E-02	-1,63E+00	

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	1,00E+00	1,15E-03	7,69E-01	7,80E-04	3,57E-02	0	7,31E-04	1,24E-02	2,32E-03	-5,33E-01	
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	
PERT	MJ	1,00E+00	1,15E-03	7,69E-01	7,80E-04	3,57E-02	0	7,31E-04	1,24E-02	2,32E-03	-5,33E-01	
PENRE	MJ	5,93E+00	9,17E-02	4,90E-02	6,20E-02	1,26E-01	0	5,82E-02	9,75E-02	2,54E-02	-6,46E-01	
PENRM	MJ	1,67E+00	0,00E+00	0,00E+00	0,00E+00	1,59E-03	0	0,00E+00	-1,59E+00	0,00E+00	0,00E+00	
PENRT	MJ	7,60E+00	9,17E-02	4,90E-02	6,20E-02	1,28E-01	0	5,82E-02	-1,49E+00	2,54E-02	-6,46E-01	
SM	kg	1,07E-02	0,00E+00	1,32E-06	0,00E+00	2,17E-04	0	0,00E+00	0,00E+00	1,28E-04	1,96E-02	
RSF	MJ	2,51E-02	4,03E-05	2,84E-05	2,73E-05	5,11E-04	0	2,56E-05	2,25E-04	5,11E-05	1,81E-03	
NRSF	MJ	5,39E-04	1,35E-04	1,68E-04	9,15E-05	2,30E-05	0	8,58E-05	0,00E+00	1,28E-04	-1,34E-02	
FW	m ³	7,43E-03	1,04E-05	1,34E-05	7,06E-06	1,97E-04	0	6,62E-06	2,33E-03	2,94E-05	-1,99E-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	2,98E-03	5,02E-06	7,45E-04	3,39E-06	1,04E-04	0	3,18E-06	0,00E+00	1,47E-03	-7,61E-04
	NHWD	kg	1,47E-01	7,97E-03	1,99E-03	5,39E-03	4,69E-03	0	5,05E-03	0,00E+00	6,77E-02	-3,34E-02
	RWD	kg	2,05E-05	6,26E-07	2,76E-07	4,23E-07	4,47E-07	0	3,97E-07	0,00E+00	1,34E-07	-9,21E-07

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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MFR	kg	0,00E+00	0,00E+00	5,31E-05	0,00E+00	7,49E-04	0	0,00E+00	3,74E-02	3,55E-06	-7,67E-04
	MER	kg	0,00E+00	0,00E+00	2,60E-08	0,00E+00	7,40E-04	0	0,00E+00	3,70E-02	3,23E-06	-1,01E-04
	EEE	MJ	0,00E+00	0,00E+00	1,60E-03	0,00E+00	7,90E-04	0	0,00E+00	3,79E-02	3,32E-05	-2,48E-04
	EET	MJ	0,00E+00	0,00E+00	2,42E-02	0,00E+00	1,19E-02	0	0,00E+00	5,73E-01	5,02E-04	-3,74E-03

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	0,00E+00

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, renewable with guarantee of origin, low voltage, Poland (kWh) - NKT	ecoinvent 3.6	71,22	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	4,45E-01	5,59E-03	5,44E-03	3,78E-03	1,08E-02	0	3,54E-03	7,44E-02	5,06E-03	-6,81E-02
ODP	kg CFC11 -eq	1,12E-07	1,10E-09	9,88E-10	7,45E-10	2,36E-09	0	6,99E-10	2,32E-09	2,54E-10	-3,13E-09
POCP	kg C ₂ H ₄ -eq	4,72E-04	6,91E-07	4,30E-06	4,68E-07	9,62E-06	0	4,38E-07	2,52E-06	8,44E-07	-3,78E-04
AP	kg SO ₂ -eq	1,13E-02	1,18E-05	5,99E-05	7,96E-06	2,28E-04	0	7,46E-06	3,26E-05	4,57E-06	-9,62E-03
EP	kg PO ₄ ³⁻ -eq	6,46E-04	1,28E-06	2,00E-05	8,64E-07	1,35E-05	0	8,10E-07	4,98E-06	2,67E-06	-4,08E-04
ADPM	kg Sb -eq	1,34E-04	1,01E-07	4,65E-08	6,80E-08	2,68E-06	0	6,38E-08	1,56E-07	9,91E-09	-6,31E-05
ADPE	MJ	6,63E+00	9,00E-02	4,80E-02	6,09E-02	1,40E-01	0	5,71E-02	9,76E-02	2,37E-02	-6,52E-01
GWPIOBC	kg CO ₂ -eq	4,62E-01	5,65E-03	3,90E-03	3,82E-03	1,11E-02	0	3,58E-03	7,44E-02	1,90E-03	-3,52E-02

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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