



Uppgiftslämnaren reserverar sig för eventuella fel i produktinformationen eller felaktigt registrerade uppgifter och förbehåller sig rätten att korrigera och/eller komplettera produktinformation utan föregående avisering

1

GRUNDDATA

Varubeskrivning

Kablar enligt denna standard är halogenfria och flamskyddade. Vid eventuell brand avges endast rök fri från korrosiva gaser och med låg röktäthet. För öppen fast förläggning, inom- och utomhus, i rör samt i mark. Vid plöjning ska försiktighet iakttas.

Övriga upplysningar

Klassificeringar

ETIM ›	
BK04 ›	
BSAB ›	
UNSPSC ›	

Leverantörsuppgifter

Företagsnamn NKT(Sweden) AB	Miljökontaktperson
Organisationsnummer 5568387004	Namn Ann Aittamaa
Adress Källviksvägen 18	Telefon 02368488
Hemsida www.nkt.se	E-post ann.aittamaa@nkt.com

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HÅLLBARHETSARBETE

Företagets certifiering

- ISO 9001
- ISO 14001
- OHSAS 18001

Polycys och riktlinjer

Se <https://www.nkt.com/about-us>

3

INNEHÅLLSDEKLARATION

Kemisk produkt	Nej
Innehåller produkten elektronik	Nej
Omfattas varan av RoHS-direktivet	Nej
Varans vikt	0,24 - 10,83 kg/m

Vara / Delkomponenter

Koncentrationen har beräknats på hela varan

Ingående material /komponenter	Vikt-% i komponent	CAS-nr (alt legering)	EG-nr (alt legering)	Vikt % i produkt	Kommentar
Polyetylen, PE, hög densitet (HDPE), låg densitet (LDPE), linjär lågdensitetspolyeten		9002-88-4		1,3 - 6,7%	
Eten-vinylacetat kopolymer synonym EVA		24937-78-8	Saknas	2,3 - 19,6%	Ingår i Flammskyddet
aluminiumhydroxid, Aluminiumtrihydrat, Amorphous alumina, Boehmite, AlH ₃ O ₃		21645-51-2	244-492-7	3,9 - 33,7%	Ingår i HFFR,Flamskydd
Koppar		7440-50-8	231-159-6	33,9 - 88,8%	
PEX tvärbunden polyeten		Övrigt, polymer		2,5 - 6,4%	

Del av materialinnehållet som är deklarerat 51,8% - 146%

Särskilt farliga ämnen

Varan innehåller INTE några ämnen med särskilt farliga egenskaper (Substances of very high concern, SVHC-ämnen) som finns med på kandidatförteckningen i en koncentration som överstiger 0,1 vikts-%

Utgåva av kandidatförteckningen som har använts
2024-06-27

Nanomaterial

Innehåller produkten tillsatt nanomaterial, som är medvetet tillsatta för att uppnå en viss funktion?: Nej

Tillsatt högflourerade ämnen (PFAS)

Innehåller produkten tillsatt högflourerade ämnen (PFAS), som är aktivt tillsatta för att uppnå en specifik funktion?: Nej

Begränsningslistan

Innehåller varan/produkten, eller någon av dess delkomponenter, ämnen som gör att produkten inte uppfyller villkoren i Begränsningslistan (Reach Bilaga XVII)?: Nej

POPs-förordningen

Innehåller varan (eller någon av dess delkomponenter) ämnen som finns i POPs-förordningen?: Nej

Övrigt

Ämnen är redovisade ned till 0,1% viktprocent enligt iBVDs redovisningskrav. Eventuell avvikelse från redovisningskraven redovisas nedan

4

RÅVAROR

Återvunnet material

Innehåller varan återvunnet material: Nej

Träråvara

Träråvara ingår i varan: Nej

5

MILJÖPÅVERKAN

Finns en miljövarudeklaration framtagen enligt EN15804 eller ISO14025 för varan

Ja

Finns annan miljövarudeklaration

Nej

6

DISTRIBUTION

Beskrivning av emballagehantering för distribution av varan

Inget emballage.

Trätrumma av värmebehandlat trä som uppfyller ISPM 15, inkl.bult och spik.

Kabel är lindad på trätrumma som ingår i ett retursystem. Kabeltrumorna kommer att i snitt användas 8 gånger innan de skrotas.

7

BYGGSCKEDET

Ställer varan särskilda krav vid lagring?

Nej

Ställer varan särskilda krav på omgivande byggvaror?

Nej

8

BRUKSSKEDET

Finns skötselanvisningar/skötselråd?

Nej

Finns en energimärkning enligt energimärkningsdirektivet (2017/1369/EU) för varan?

Ej relevant

9

RIVNING

Kräver varan särskilda åtgärder för skydd av hälsa och miljö vid rivning/demontering?

Nej

10

AVFALLSHANTERING

Omfattas den levererade varan av förordningen (2014:1075) om producentansvar för elektriska och elektroniska produkter när den blir avfall?

Nej

Är återanvändning möjlig för hela eller delar av varan?

Ja

Ja men återanvändning av kabel rekommenderas inte ur ett elsäkerhetsperspektiv.

Är materialåtervinning möjlig för hela eller delar av varan?

Ja

Metaller 100% återvinning

Övriga material går att återvinna.

Är energiåtervinning möjlig för hela eller delar av varan? Ja

Allt utom metaller kan energiutvinnas.

Har leverantören restriktioner och rekommendationer för återanvändning, material- eller energiåtervinning eller deponering? Ja

Återanvändning av kabel rekommenderas inte ur ett elsäkerhetsperspektiv.

När den levererade varan blir avfall, klassas den då som farligt avfall? Nej

Avfallskod (EWC) för den levererade varan 170411

E-nummer	Leverantörens artikelnummer	GTIN
00 180 05	112726001D0500	7394479021752
00 180 15	112726002D0500	7394479021776
00 180 25	112726003D0500	7394479021790
00 182 05	112726014D0500	7394479022018
00 182 15	112726015D0500	7394479022032
00 182 35	112726017D0500	7394479022070
00 182 39	112726017D0800	7394479022087
00 180 00	112726001	7394479021745
00 180 10	112726002	7394479021769
00 180 20	112726003	7394479021783
00 180 30	112726004	7394479021806
00 180 35	112726004D0500	7394479021813
00 180 40	112726005	7394479021820
00 180 45	112726005D0500	7394479021837
00 180 50	112726006	7394479021844
00 180 55	112726006D0500	7394479021851
00 180 60	112726007	7394479021868
00 180 65	112726007D0500	7394479021875
00 180 70	112726008	7394479021882
00 180 75	112726008D0500	7394479021899
00 180 80	112726009	7394479021905
00 180 85	112726009D0500	7394479021912
00 180 90	112726010	7394479021929
00 180 95	112726010D0500	7394479021936
00 181 00	112726011	7394479021943
00 181 05	112726011D0500	7394479021950
00 181 10	112726012	7394479021967
00 181 15	112726012D0500	7394479021974
00 181 20	112726013	7394479021981
00 181 25	112726013D0500	7394479021998
00 182 00	112726014	7394479022001
00 182 10	112726015	7394479022025
00 182 20	112726016	7394479022049
00 182 25	112726016D0500	7394479022056
00 182 30	112726017	7394479022063
00 182 40	112726018	7394479022094
00 182 45	112726018D0500	7394479022100
00 182 50	112726019	7394479022117
00 182 55	112726019D0500	7394479022124
00 182 60	112726020	7394479022131
00 182 65	112726020D0500	7394479022148
00 182 70	112726021	7394479022155

00 182 75	112726021D0500	7394479022162
00 182 80	112726022	7394479022179
00 182 85	112726022D0500	7394479022186
00 182 90	112726023	7394479022193
00 182 95	112726023D0500	7394479022209
00 183 00	112726024	7394479022216
00 183 05	112726024D0500	7394479022223
00 183 10	112726025	7394479022230
00 183 15	112726025D0500	7394479022247
00 183 20	112726026	7394479022254
00 183 25	112726026D0500	7394479022261

Produktdatablad	PROD_23038_0018235.pdf
PrestandadeklARATION	CEDKL_23038_0018065.pdf
Säkerhetsblad	
RoHS-intyg	
MiljövarudeklARATION	NEPD-6536-5804_FXQJ-IFSI-EMC-4x240-120-0-6-1kV-Dca (1).pdf
Skötselanvisning	

Övriga bifogade dokument

-EPD_125823 (1).pdf

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca



NKT

The Norwegian EPD Foundation

Owner of the declaration:

NKT A/S

Product:

FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

Declared unit:

1 m

This declaration is based on Product Category Rules:

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

NPCR 027:2020 Part B for Electrical cables and wires

Program operator:

The Norwegian EPD Foundation

Declaration number:

NEPD-6536-5804-EN

Registration number:

NEPD-6536-5804-EN

Issue date: 07.05.2024

Valid to: 07.05.2029

EPD software:

LCAno EPD generator ID: 125823

General information

Product

FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

Program operator:

The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-norge.no

Declaration number:

NEPD-6536-5804-EN

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 027:2020 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 FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

Declared unit with option:

A1,A2,A3,A4,A5,B1,B2,B3,B4,B5,B6,B7,C1,C2,C3,C4,D

Functional unit:

1 m of FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca 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. Verification of each EPD is made according to EPD-Norway's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Norway, and iii) the process is reviewed annually by an independent third party verifier. 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 EPDNorway's procedures and guidelines for verification and approval of EPD tools. Approval number: NEPD32.

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 (Sweden) AB
Källviksvägen 18
SE-791 29 Falun, Sweden

Place of production:

NKT production site Falun (Sweden)
Källviksvägen 18
SE-791 29 Falun, Sweden

Management system:

ISO 9001, ISO 14001, ISO 45001

Organisation no:

957 338 690

Issue date:

07.05.2024

Valid to:

07.05.2029

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.

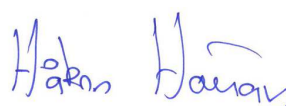
Development and verification of EPD:

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: NEPD32

Developer of EPD: Joakim Holm

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

Approved:



Håkon Hauan
Managing Director of EPD-Norway

Product

Product description:

Cables according to this standard are halogen-free and flame retardant. In case of fire, only smoke free of corrosive gases and with low smoke density are emitted.

Intended for permanent installation in- and outdoors, in ground, in water and in pipes. Caution shall be taken into account if plowing.

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

1. Copper conductor
2. XLPE insulation
3. Bedding
4. Concentric copper conductor with counterhelix
5. Halogen-free flame retardant polyolefine sheath

Materials	kg	%
HFFR Polyolefin	0,70	6,53
Metal - Copper	9,62	89,15
Plastic - Polyethylene	0,45	4,20
Tape	0,01	0,11
Total	10,79	100,00

Technical data:

Norm (standard): SS4241418

Rated voltage U₀/U: 0,6/1 kV

Test voltage: 15 (DC) kV

Maximal short-circuit temperature: 250 °C

Maximal operating conductor temperature: 90 °C

Temperature range: from -20 up to +70 °C

Min. temperature for laying and manipulation: -20 °C

Min. storage temperature: -30 °C

Self-extinguishing of one cable: IEC 60332-1

Smoke density: IEC 61034

Corrosivity of emitted gases: EN 60754-1

Conductivity - pH change : EN 60754-2

CPR-Classification (reaction on fire): Dca-s2,d2,a2

UV stability: Yes

Max. permitted pulling force: 50 N/mm²

Radius of bend minimal: 8 x D mm

Packaging: drum

Production site: NKT Falun

RoHS: Yes

REACH: Yes

CE Conformity: Yes

LVD Conformity: Yes

Market:

Northern Europe

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 FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

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.

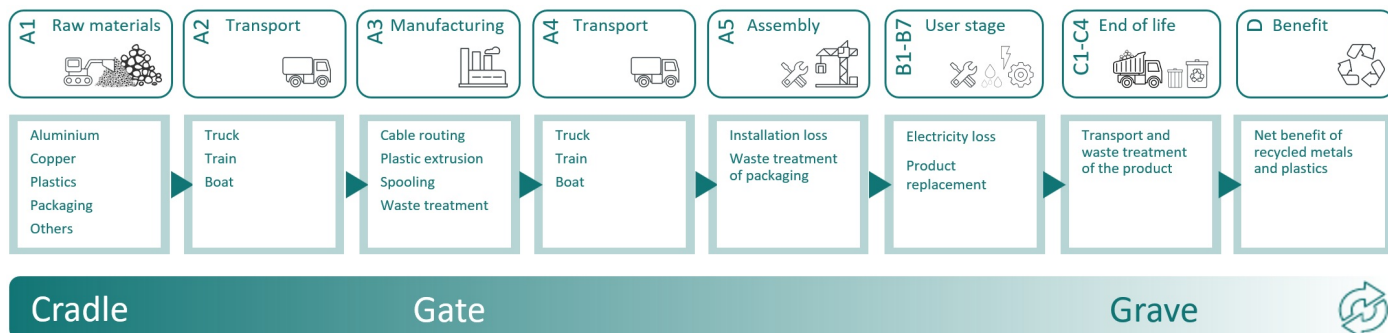
Materials	Source	Data quality	Year
HFFR Polyolefin	ecoinvent 3.6	Database	2019
Metal - Copper	ecoinvent 3.6	Database	2019
Plastic - Polyethylene	ecoinvent 3.6	Database	2019
Tape	ecoinvent 3.6	Database	2019

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	X	X	X	X	X	X	X	X	X	X	X	X

System boundary:

The flowchart below illustrates the system boundaries of the analysis:



Additional technical information:

The reference product FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca represents the entire product family based on the highest material consumption. Please contact us for a specific EPD of another cable in the product family:

FXQJ 0,6/1 kV 3x10/10 mm²
FXQJ 0,6/1 kV 3x120/70 mm²
FXQJ 0,6/1 kV 3x150/70 mm²
FXQJ 0,6/1 kV 3x16/16 mm²
FXQJ 0,6/1 kV 3x185/95 mm²
FXQJ 0,6/1 kV 3x2,5/2,5 mm²
FXQJ 0,6/1 kV 3x240/120 mm²
FXQJ 0,6/1 kV 3x25/16 mm²
FXQJ 0,6/1 kV 3x35/16 mm²
FXQJ 0,6/1 kV 3x50/25 mm²
FXQJ 0,6/1 kV 3x6/6 mm²
FXQJ 0,6/1 kV 3x70/35 mm²
FXQJ 0,6/1 kV 3x95/50 mm²
FXQJ 0,6/1 kV 4x10/10 mm²
FXQJ 0,6/1 kV 4x120/70 mm²
FXQJ 0,6/1 kV 4x150/70 mm²
FXQJ 0,6/1 kV 4x16/16 mm²
FXQJ 0,6/1 kV 4x185/95 mm²
FXQJ 0,6/1 kV 4x2,5/2,5 mm²
FXQJ 0,6/1 kV 4x240/120 mm²
FXQJ 0,6/1 kV 4x25/16 mm²
FXQJ 0,6/1 kV 4x35/16 mm²
FXQJ 0,6/1 kV 4x50/25 mm²
FXQJ 0,6/1 kV 4x6/6 mm²
FXQJ 0,6/1 kV 4x70/35 mm²
FXQJ 0,6/1 kV 4x95/50 mm²

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%.

Modules B1, B2, B3, B4, B5, and B7 = Company data shows that no significant activities have been reported for use, maintenance, repair, replacement, refurbishment, and water use. This reflects an absence of impacts during the reference service life of the cable in these modules.

Module B6 = The operational energy use of the cable is calculated based on the methodology described in PEP Ecopassport, Product Specific Rules (PSR) for wires, cables and accessories, reference PSR-0001-ed3-EN-2015 10 16. The following parameters are used to calculate the electricity loss of the cable:

- Reference service life = 30 years (according to appendix 1 of the PSR)
- Number of conductors = 4 units
- Use rate = 70 % percent (according to appendix 1 of the PSR)
- Linear conductor resistivity = 0,0000754 Ohm per meter
- Current intensity = 1 Ampere

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, 16-32 tonnes, EURO 6 (km) - Europe	36,7 %	700	0,043	l/tkm	30,10
Assembly (A5)	Unit	Value			
Product loss during installation (percentage of cable)	Units/DU	0,02			
Operational energy (B6)	Unit	Value			
Electricity, Nordic (kWh)	kWh/DU	0,06			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36,7 %	300	0,043	l/tkm	12,90
Waste processing (C3)	Unit	Value			
Copper to recycling (kg)	kg	5,77			
Waste treatment of plastic mixture, incineration with energy recovery and fly ash extraction (kg)	kg	0,36			
Waste treatment of polyethylene (PE), incineration with energy recovery and fly ash extraction (kg)	kg	0,23			
Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of Plastic mixture, process per kg ashes and residues (kg)	kg	0,01			
Landfilling of ashes from incineration of Polyethylene (PE), process per kg ashes and residues (kg)	kg	0,01			
Landfilling of copper (kg)	kg	3,85			
Landfilling of plastic mixture (kg)	kg	0,59			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity (MJ)	MJ	0,99			
Substitution of primary copper with net scrap (kg)	kg	3,75			
Substitution of thermal energy, district heating (MJ)	MJ	14,98			

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	B1	B2	B3
	GWP-total	kg CO ₂ -eq	7,89E+01	1,41E+00	1,79E+00	1,23E+00	1,70E+00	0	0	0
	GWP-fossil	kg CO ₂ -eq	7,72E+01	1,41E+00	1,24E+00	1,23E+00	1,65E+00	0	0	0
	GWP-biogenic	kg CO ₂ -eq	1,71E+00	5,81E-04	2,15E-01	5,10E-04	3,85E-02	0	0	0
	GWP-luluc	kg CO ₂ -eq	6,42E-02	5,04E-04	3,38E-01	4,39E-04	8,08E-03	0	0	0
	ODP	kg CFC11 -eq	4,46E-06	3,19E-07	2,96E-07	2,79E-07	1,08E-07	0	0	0
	AP	mol H ⁺ -eq	8,18E+00	4,37E-03	3,82E-03	3,54E-03	1,64E-01	0	0	0
	EP-FreshWater	kg P -eq	8,06E-02	1,12E-05	3,37E-05	9,85E-06	1,61E-03	0	0	0
	EP-Marine	kg N -eq	2,64E-01	8,83E-04	1,33E-03	7,01E-04	5,34E-03	0	0	0
	EP-Terrestrial	mol N -eq	3,80E+00	9,87E-03	1,34E-02	7,84E-03	7,66E-02	0	0	0
	POCP	kg NMVOC -eq	1,20E+00	3,66E-03	3,35E-03	3,00E-03	2,43E-02	0	0	0
	ADP-minerals&metals ¹	kg Sb-eq	2,25E-02	3,87E-05	6,31E-06	3,41E-05	4,52E-04	0	0	0
	ADP-fossil ¹	MJ	9,21E+02	2,13E+01	6,57E+01	1,86E+01	2,06E+01	0	0	0
	WDP ¹	m ³	2,49E+01	2,05E+01	1,01E+04	1,80E+01	2,04E+02	0	0	0

Indicator		Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
	GWP-total	kg CO ₂ -eq	0	0	8,09E-03	0	0	5,29E-01	1,53E+00	1,23E-01	-9,11E+00
	GWP-fossil	kg CO ₂ -eq	0	0	7,54E-03	0	0	5,29E-01	1,53E+00	1,23E-01	-9,06E+00
	GWP-biogenic	kg CO ₂ -eq	0	0	1,38E-04	0	0	2,19E-04	2,40E-05	6,21E-06	-4,19E-02
	GWP-luluc	kg CO ₂ -eq	0	0	4,13E-04	0	0	1,88E-04	4,25E-06	2,29E-05	-1,25E-02
	ODP	kg CFC11 -eq	0	0	8,15E-10	0	0	1,20E-07	2,37E-09	1,73E-08	-6,33E-03
	AP	mol H ⁺ -eq	0	0	3,48E-05	0	0	1,52E-03	2,72E-04	4,76E-04	-1,51E+00
	EP-FreshWater	kg P -eq	0	0	4,98E-07	0	0	4,22E-06	2,16E-07	1,07E-06	-1,02E-02
	EP-Marine	kg N -eq	0	0	5,49E-06	0	0	3,01E-04	1,30E-04	2,40E-04	-6,21E-02
	EP-Terrestrial	mol N -eq	0	0	7,37E-05	0	0	3,36E-03	1,36E-03	1,92E-03	-9,62E-01
	POCP	kg NMVOC -eq	0	0	1,73E-05	0	0	1,29E-03	3,26E-04	5,57E-04	-2,61E-01
	ADP-minerals&metals ¹	kg Sb-eq	0	0	1,17E-07	0	0	1,46E-05	1,17E-07	4,67E-07	-8,44E-03
	ADP-fossil ¹	MJ	0	0	2,04E-01	0	0	7,99E+00	1,61E-01	1,41E+00	-8,14E+01
	WDP ¹	m ³	0	0	1,57E+01	0	0	7,73E+00	9,43E-01	3,42E+01	4,76E+02

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 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

"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	B1	B2	B3
 PM	Disease incidence	1,43E-05	8,58E-08	6,18E-08	7,55E-08	2,90E-07	0	0	0
 IRP ²	kgBq U235 -eq	1,85E+00	9,29E-02	2,18E+00	8,15E-02	8,46E-02	0	0	0
 ETP-fw ¹	CTUe	6,14E+04	1,57E+01	2,86E+01	1,38E+01	1,28E+03	0	0	0
 HTP-c ¹	CTUh	1,50E-06	0,00E+00	8,28E-10	0,00E+00	3,00E-08	0	0	0
 HTP-nc ¹	CTUh	1,34E-04	1,72E-08	1,88E-08	1,51E-08	2,68E-06	0	0	0
 SQP ¹	dimensionless	7,78E+02	1,48E+01	2,65E+01	1,30E+01	1,67E+01	0	0	0

Indicator	Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
 PM	Disease incidence	0	0	1,84E-10	0	0	3,24E-08	1,15E-09	8,35E-09	-3,06E-06
 IRP ²	kgBq U235 -eq	0	0	4,64E-03	0	0	3,49E-02	3,69E-04	9,21E-03	-1,07E-01
 ETP-fw ¹	CTUe	0	0	2,55E-01	0	0	5,92E+00	1,93E+00	2,38E+03	-1,39E+04
 HTP-c ¹	CTUh	0	0	6,00E-12	0	0	0,00E+00	6,50E-11	1,11E-10	-1,96E-07
 HTP-nc ¹	CTUh	0	0	1,56E-10	0	0	6,47E-09	2,81E-09	2,03E-09	-1,68E-05
 SQP ¹	dimensionless	0	0	1,53E-01	0	0	5,59E+00	2,67E-02	2,73E+00	-1,84E+02

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 = Potential Soil Quality Index (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	B1	B2	B3	
PERE	MJ	1,25E+02	3,03E-01	3,57E+01	2,67E-01	3,23E+00	0	0	0	
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0	0	
PERT	MJ	1,25E+02	3,03E-01	3,57E+01	2,67E-01	3,23E+00	0	0	0	
PENRE	MJ	8,90E+02	2,13E+01	6,59E+01	1,86E+01	2,00E+01	0	0	0	
PENRM	MJ	3,27E+01	0,00E+00	0,00E+00	0,00E+00	3,12E-02	0	0	0	
PENRT	MJ	9,23E+02	2,13E+01	6,59E+01	1,86E+01	2,00E+01	0	0	0	
SM	kg	2,12E+00	0,00E+00	0,00E+00	0,00E+00	4,28E-02	0	0	0	
RSF	MJ	5,79E-01	1,08E-02	1,22E-01	9,55E-03	1,45E-02	0	0	0	
NRSF	MJ	1,43E+00	3,87E-02	-1,80E-01	3,41E-02	2,64E-02	0	0	0	
FW	m ³	1,32E+00	2,27E-03	8,64E-02	1,99E-03	2,83E-02	0	0	0	

Indicator	Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	0	0	2,00E-01	0	0	1,14E-01	7,81E-03	1,85E-01	-3,98E+01
PERM	MJ	0	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	0	0	2,00E-01	0	0	1,14E-01	7,81E-03	1,85E-01	-3,98E+01
PENRE	MJ	0	0	2,07E-01	0	0	7,99E+00	1,61E-01	1,41E+00	-8,14E+01
PENRM	MJ	0	0	0,00E+00	0	0	0,00E+00	-3,12E+01	0,00E+00	0,00E+00
PENRT	MJ	0	0	2,07E-01	0	0	7,99E+00	-3,10E+01	1,41E+00	-8,14E+01
SM	kg	0	0	0,00E+00	0	0	0,00E+00	0,00E+00	1,93E-02	2,63E+00
RSF	MJ	0	0	2,02E-03	0	0	4,09E-03	1,76E-04	3,83E-03	2,48E-01
NRSF	MJ	0	0	0,00E+00	0	0	1,46E-02	0,00E+00	1,07E-03	8,42E-02
FW	m ³	0	0	9,11E-04	0	0	8,55E-04	1,11E-03	1,84E-03	-2,29E-01

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 = Net use of 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	B1	B2	B3	
	HWD	kg	7,33E-01	1,09E-03	2,68E-01	9,62E-04	2,31E-02	0	0	0	
	NHWD	kg	2,42E+01	1,03E+00	5,69E-01	9,07E-01	6,24E-01	0	0	0	
	RWD	kg	1,88E-03	1,45E-04	9,70E-04	1,27E-04	6,27E-05	0	0	0	
Indicator		Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
	HWD	kg	0	0	1,91E-05	0	0	4,12E-04	0,00E+00	1,51E-01	-1,02E-01
	NHWD	kg	0	0	1,26E-03	0	0	3,89E-01	0,00E+00	4,49E+00	-4,35E+00
	RWD	kg	0	0	2,13E-06	0	0	5,44E-05	0,00E+00	9,81E-06	-9,66E-05

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

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

*INA Indicator Not Assessed

End of life - Output flow											
Indicator		Unit	A1	A2	A3	A4	A5	B1	B2	B3	
	CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0	0	
	MFR	kg	0,00E+00	0,00E+00	1,17E-02	0,00E+00	1,16E-01	0	0	0	
	MER	kg	0,00E+00	0,00E+00	1,08E+00	0,00E+00	1,17E-02	0	0	0	
	EEE	MJ	0,00E+00	0,00E+00	6,33E-01	0,00E+00	3,26E-02	0	0	0	
	EET	MJ	0,00E+00	0,00E+00	9,57E+00	0,00E+00	4,93E-01	0	0	0	
Indicator		Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
	CRU	kg	0	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MFR	kg	0	0	0,00E+00	0	0	0,00E+00	5,77E+00	8,83E-05	-1,03E-01
	MER	kg	0	0	0,00E+00	0	0	0,00E+00	5,85E-01	4,87E-04	-1,35E-02
	EEE	MJ	0	0	0,00E+00	0	0	0,00E+00	9,90E-01	4,40E-03	-3,31E-02
	EET	MJ	0	0	0,00E+00	0	0	0,00E+00	1,50E+01	6,65E-02	-5,01E-01

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

"Reading example: 9,0 E-03 = 9,0*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 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	Source	Amount	Unit
Electricity, renewable with guarantee of origin, low voltage, Sweden (kWh) - NKT	ecoinvent 3.6	114,84	g CO ₂ -eq/kWh

Dangerous substances

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

Indoor environment

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products										
Indicator	Unit	A1	A2	A3	A4	A5	B1	B2	B3	
GWPIOBC	kg CO ₂ -eq	7,88E+01	1,41E+00	1,74E+00	1,23E+00	1,69E+00	0	0	0	
Indicator	Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	0	0	1,10E-02	0	0	5,29E-01	1,53E+00	6,79E-02	-4,35E+00

GWP-IOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

Bibliography

ISO 14025:2010. Environmental labels and declarations - Type III environmental declarations - Principles and procedures. International Organization for Standardization.

ISO 14044:2006. Environmental management - Life cycle assessment - Requirements and guidelines. International Organization for Standardization.

EN 15804:2012+A2:2019. Environmental product declaration - Core rules for the product category of construction products. European Committee for Standardization.

ISO 21930:2017. Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products. International Organization for Standardization.

EN 50693:2019. Product category rules for life cycle assessments of electronic and electrical products and systems. European Committee for Standardization.

Ecoinvent v3, 2019. Allocation, cut-off by classification. Swiss Centre of Life Cycle Inventories.

Iversen et al., (2021). eEPD v2021.09, background information for EPD generator tool system verification, LCA.no. Report number: 07.21. System verification report.

Philis et al., (2022). EPD generator for NPCR 027 part B for electrical wires and cables, background information for EPD generator application and LCA data, LCA.no Report number: 03.22. PCR verification report.

EPD Norway (2022). NPCR Part A: Construction products and services. The Norwegian EPD foundation. Version 2.0 published 24.03.2021.

EPD Norway (2022). NPCR 027 Part B for electrical cables and wires. The Norwegian EPD foundation. Version 2.0 published 01.03.2022.

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	ECO Platform ECO Portal	web: www.eco-platform.org web: ECO Portal

FXQJ EMC 0,6/1 kV Kraftkabel 1 kV



Power cable 1 kV

Standard: SS 424 14 18, HD 603

Standard: SS 424 14 18, HD 603



Konstruktion:

Construction:

- 1 Ledare: fåtrådig glöddad koppar enligt IEC 60228 klass 2**
2,5-50 mm²: rund
70-240 mm²: sektorformad
Conductor: annealed copper according to IEC 60228 class 2
2,5-50 mm²: round
70-240 mm²: sector shaped
- 2 Isolering: XLPE**
Partfärger:
3-ledare: brun, svart, grå
4-ledare: blå, brun, svart, grå
Insulation: XLPE
Colour identification:
3-core: brown, black, grey
4-core: blue, brown, black, grey
- 3 Cu folie**
Cu foil
- 4 Skärm: glöddade koppartrådar**
Screen: annealed copper wires
- 5 Mantel: svart halogenfri flamskyddad polyolefin**
Märkning exempel: FXQJ 0,6/1 kV 4x25/16
samt metermärkning
Sheath: black halogen free flame retardant polyolefine
Example of marking: FXQJ 0,6/1 kV 4x25/16 and meter marking

Användning:

Intended use:

Kablar enligt denna standard är halogenfria och flamskyddade. Vid eventuell brand avges endast rök fri från korrosiva gaser och med låg rökthet. För öppen fast förläggning, inom- och utomhus, i rör samt i mark. Vid plöjning ska försiktighet iakttas.

Cables according to this standard are halogen free and flame retardant. In case of fire, only smoke free of corrosive gases and with low smoke density are emitted. Intended for permanent installation in- and outdoors, in ground and in pipes. Caution shall be taken into account if plowing.

Egenskaper:

Properties:

Märkspänning Rated voltage	0,6/1 kV	Högsta tillåtna dragkraft vid utdragning vid koppling direkt i samtliga ledare Maximum pulling force when connected to all conductors	50 N/mm ²
Maximal kortslutningstemperatur Maximal short circuit temperature	250 °C	Brandklass Fire classification	D _{ca} -s2, d2, a2
Lägsta installationstemperatur Vid temperaturer under 0 °C ska försiktighet iakttas. Minimum temperature during installation. Caution shall be taken into account at temperatures below 0 °C.	-20 °C	Uppfyller lågspänningsdirektivet Fulfills the low voltage directive	Ja Yes
Maximal ledartemperatur vid kontinuerlig drift Maximum conductor temperature	90°C	Uppfyller RoHS Fulfills RoHS	Ja Yes
Minsta böjningsradie Minimum bending radius	8 x D	Uppfyller REACH Fulfills REACH	Ja Yes

Tekniska data och beställningsinformation:

Technical data and ordering information

Produkt Product	Ledarantal x area Number of cores and cross sections (mm ²)	E-nummer E-number	Förpackning/ leveranslängd/ trumstorlek Packaging/length/ drum size	Ledare nom. Nominal conductor (mm)	Isolering nom. Nominal Insulation (mm)	Mantel nom. Nominal Sheath (mm)	Vikt Weight (kg/km)	Ledar resistans Conductor resistance (Ω/km)	Skärm resistans Concentric conductor resistance (Ω/km)
FXQJ	3x2,5/2,5	00 180 05	Trumma 500 (K7)	2,0	3,4	12,5	238	7,41	7,41
FXQJ	4x2,5/2,5	00 182 05	Trumma 500 (K7)	2,0	3,4	13,4	270	7,41	7,41
FXQJ	3x6/6	00 180 15	Trumma 500 (K8)	3,0	5,2	15,0	410	3,08	3,08
FXQJ	4x6/6	00 182 15	Trumma 500 (K8)	3,0	4,4	16,0	476	3,08	3,08
FXQJ	4x10/10	00 182 25	Trumma 500 (K9)	3,9	5,5	18,4	694	1,83	1,83
FXQJ	3x16/16	00 180 35	Trumma 500 (K9)	4,7	6,1	19,0	849	1,15	1,15
FXQJ	4x16/16	00 182 35	Trumma 500 (K10)	4,7	6,1	20,6	1018	1,15	1,15
FXQJ	3x25/16	00 180 45	Trumma 500 (K10)	5,9	7,7	20,6	1051	0,727	1,15
FXQJ	4x25/16	00 182 45	Trumma 500 (K11)	5,9	7,7	23,0	1318	0,727	1,15
FXQJ	3x35/16	00 180 55	Trumma 500 (K11)	6,9	8,7	22,5	1308	0,524	1,15
FXQJ	4x35/16	00 182 55	Trumma 500 (K12)	6,9	8,7	25,3	1652	0,524	1,15
FXQJ	3x50/25	00 180 65	Trumma 500 (K12)	8,1	10,1	26,4	1755	0,387	0,727
FXQJ	4x50/25	00 182 65	Trumma 500 (K14)	8,1	10,1	29,8	2236	0,387	0,727
FXQJ	3x70/35	00 180 75	Trumma 500 (K12)	-	-	26,1	2583	0,268	0,524
FXQJ	4x70/35	00 182 75	Trumma 500 (K14)	-	-	32,2	3273	0,268	0,524
FXQJ	3x95/50	00 180 85	Trumma 500 (K14)	-	-	29,6	3391	0,193	0,387
FXQJ	4x95/50	00 182 75	Trumma 500 (K18)	-	-	34,1	4288	0,193	0,387
FXQJ	3x120/70	00 180 95	Trumma 500 (K16)	-	-	33,0	4246	0,153	0,268
FXQJ	4x120/70	00 182 85	Trumma 500 (K18)	-	-	40,1	5605	0,153	0,268
FXQJ	3x150/70	00 181 05	Trumma 500 (K18)	-	-	39,6	5255	0,124	0,268
FXQJ	4x150/70	00 182 95	Trumma 500 (K22)	-	-	41,9	6797	0,124	0,268
FXQJ	3x185/95	00 181 15	Trumma 500 (K22)	-	-	43,9	6625	0,0991	0,193
FXQJ	4x185/95	00 183 25	Trumma 500 (K22)	-	-	50,0	8552	0,0991	0,193
FXQJ	3x240/120	00 181 25	Trumma 500 (K22)	-	-	49,1	8444	0,0754	0,153
FXQJ	4x240/120	00 183 35	Trumma 500 (K26)	-	-	55,0	10825	0,0754	0,153

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DOP 1211_000039 Rev 01



DECLARATION OF PERFORMANCE FXQJ EMC

Product type: FXQJ EMC

Manufactured by: NKT (Sweden) AB
Källviksvägen 18
791 29 Falun

Intended use: Cables for uses subject to regulations on reaction to fire

**Conformity to EU
Legislation:** CPR - REGULATION (EU) No 305/2011 OF THE EUROPEAN
PARLIAMENT AND OF THE COUNCIL laying down harmonised
conditions for the marketing of construction products

Notified body

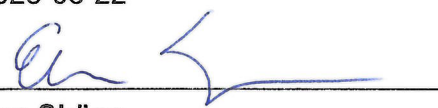
2652

Declared performance:

Essential characteristics	Declared performance	Harmonised standard	System of AVCP
Reaction to fire	Dca-s2,d2,a2	EN 50575:2014 + A1:2016	3
Dangerous substances	NPD	EN 50575:2014 + A1:2016	3

This declaration of performance is issued under the sole responsibility of the manufacturer.

Signed for and on behalf of:
NKT (Sweden) AB Falun
2023-06-22


Eva Sköns

Cable Design Engineer
NKT (Sweden) AB, Falun

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca



The Norwegian EPD Foundation

Owner of the declaration:

NKT A/S

Product:

FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

Declared unit:

1 m

This declaration is based on Product Category Rules:

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

NPCR 027:2020 Part B for Electrical cables and wires

Program operator:

The Norwegian EPD Foundation

Declaration number:

Registration number:

Issue date:

Valid to:

EPD software:

LCAno EPD generator ID: 125823

General information

Product

FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

Program operator:

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Phone: +47 977 22 020
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Declaration number:

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 027:2020 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 FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

Declared unit with option:

A1,A2,A3,A4,A5,B1,B2,B3,B4,B5,B6,B7,C1,C2,C3,C4,D

Functional unit:

1 m of FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca 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. Verification of each EPD is made according to EPD-Norway's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Norway, and iii) the process is reviewed annually by an independent third party verifier. 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 EPDNorway'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 (Sweden) AB
Källviksvägen 18
SE-791 29 Falun, Sweden

Place of production:

NKT production site Falun (Sweden)
Källviksvägen 18
SE-791 29 Falun, Sweden

Management system:

ISO 9001, ISO 14001, ISO 45001

Organisation no:

957 338 690

Issue date:

Valid to:

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: NEPDT32

Developer of EPD: Joakim Holm

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

Approved:



Håkon Hauan, CEO EPD-Norge

Product

Product description:

Cables according to this standard are halogen-free and flame retardant. In case of fire, only smoke free of corrosive gases and with low smoke density are emitted.

Intended for permanent installation in- and outdoors, in ground, in water and in pipes. Caution shall be taken into account if plowing.

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

1. Copper conductor
2. XLPE insulation
3. Bedding
4. Concentric copper conductor with counterhelix
5. Halogen-free flame retardant polyolefine sheath

Materials	kg	%
Tape	0,01	0,11
Metal - Copper	9,62	89,15
HFFR Polyolefin	0,70	6,53
Plastic - Polyethylene	0,45	4,20
Total	10,79	100,00

Technical data:

Norm (standard): SS4241418

Rated voltage U_0/U : 0,6/1 kV

Test voltage: 15 (DC) kV

Maximal short-circuit temperature: 250 °C

Maximal operating conductor temperature: 90 °C

Temperature range: from -20 up to +70 °C

Min. temperature for laying and manipulation: -20 °C

Min. storage temperature: -30 °C

Self-extinguishing of one cable: IEC 60332-1

Smoke density: IEC 61034

Corrosivity of emitted gases: EN 60754-1

Conductivity - pH change : EN 60754-2

CPR-Classification (reaction on fire): Dca-s2,d2,a2

UV stability: Yes

Max. permitted pulling force: 50 N/mm²

Radius of bend minimal: 8 x D mm

Packaging: drum

Production site: NKT Falun

RoHS: Yes

REACH: Yes

CE Conformity: Yes

LVD Conformity: Yes

Market:

Northern Europe

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 FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca

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.

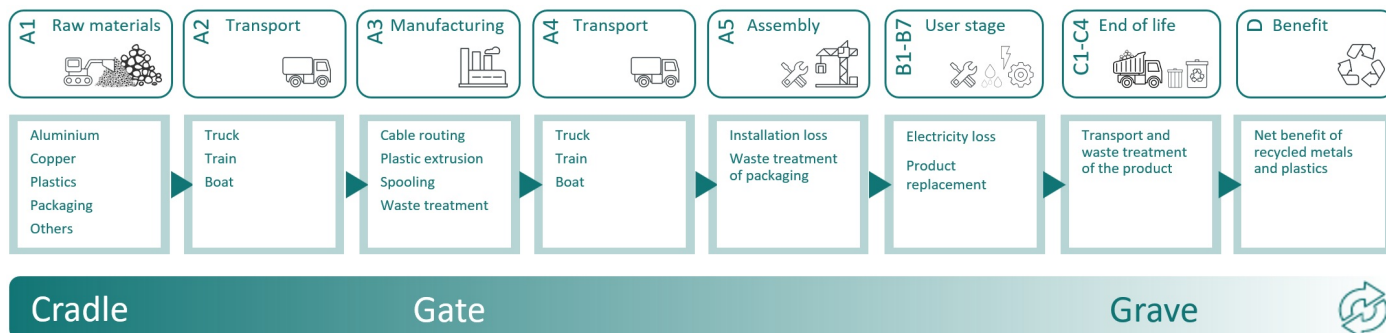
Materials	Source	Data quality	Year
HFFR Polyolefin	ecoinvent 3.6	Database	2019
Metal - Copper	ecoinvent 3.6	Database	2019
Plastic - Polyethylene	ecoinvent 3.6	Database	2019
Tape	ecoinvent 3.6	Database	2019

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	X	X	X	X	X	X	X	X	X	X	X	X

System boundary:

The flowchart below illustrates the system boundaries of the analysis:



Additional technical information:

The reference product FXQJ/IFSI EMC 4x240/120 0,6/1kV Dca represents the entire product family based on the highest material consumption. Please contact us for a specific EPD of another cable in the product family:

FXQJ 0,6/1 kV 3x10/10 mm²
 FXQJ 0,6/1 kV 3x120/70 mm²
 FXQJ 0,6/1 kV 3x150/70 mm²
 FXQJ 0,6/1 kV 3x16/16 mm²
 FXQJ 0,6/1 kV 3x185/95 mm²
 FXQJ 0,6/1 kV 3x2,5/2,5 mm²
 FXQJ 0,6/1 kV 3x240/120 mm²
 FXQJ 0,6/1 kV 3x25/16 mm²
 FXQJ 0,6/1 kV 3x35/16 mm²
 FXQJ 0,6/1 kV 3x50/25 mm²
 FXQJ 0,6/1 kV 3x6/6 mm²
 FXQJ 0,6/1 kV 3x70/35 mm²
 FXQJ 0,6/1 kV 3x95/50 mm²
 FXQJ 0,6/1 kV 4x10/10 mm²
 FXQJ 0,6/1 kV 4x120/70 mm²
 FXQJ 0,6/1 kV 4x150/70 mm²
 FXQJ 0,6/1 kV 4x16/16 mm²
 FXQJ 0,6/1 kV 4x185/95 mm²
 FXQJ 0,6/1 kV 4x2,5/2,5 mm²
 FXQJ 0,6/1 kV 4x240/120 mm²
 FXQJ 0,6/1 kV 4x25/16 mm²
 FXQJ 0,6/1 kV 4x35/16 mm²
 FXQJ 0,6/1 kV 4x50/25 mm²
 FXQJ 0,6/1 kV 4x6/6 mm²
 FXQJ 0,6/1 kV 4x70/35 mm²
 FXQJ 0,6/1 kV 4x95/50 mm²

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%.

Modules B1, B2, B3, B4, B5, and B7 = Company data shows that no significant activities have been reported for use, maintenance, repair, replacement, refurbishment, and water use. This reflects an absence of impacts during the reference service life of the cable in these modules.

Module B6 = The operational energy use of the cable is calculated based on the methodology described in PEP Ecopassport, Product Specific Rules (PSR) for wires, cables and accessories, reference PSR-0001-ed3-EN-2015 10 16. The following parameters are used to calculate the electricity loss of the cable:

- Reference service life = 30 years (according to appendix 1 of the PSR)
- Number of conductors = 4 units
- Use rate = 70 % percent (according to appendix 1 of the PSR)
- Linear conductor resistivity = 0,0000754 Ohm per meter
- Current intensity = 1 Ampere

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, 16-32 tonnes, EURO 6 (km) - Europe	36,7 %	700	0,043	l/tkm	30,10
Assembly (A5)	Unit	Value			
Product loss during installation (percentage of cable)	Units/DU	0,02			
Operational energy (B6)	Unit	Value			
Electricity, Nordic (kWh)	kWh/DU	0,06			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36,7 %	300	0,043	l/tkm	12,90
Waste processing (C3)	Unit	Value			
Copper to recycling (kg)	kg	5,77			
Waste treatment of plastic mixture, incineration with energy recovery and fly ash extraction (kg)	kg	0,36			
Waste treatment of polyethylene (PE), incineration with energy recovery and fly ash extraction (kg)	kg	0,23			
Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of Plastic mixture, process per kg ashes and residues (kg)	kg	0,01			
Landfilling of ashes from incineration of Polyethylene (PE), process per kg ashes and residues (kg)	kg	0,01			
Landfilling of copper (kg)	kg	3,85			
Landfilling of plastic mixture (kg)	kg	0,59			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity (MJ)	MJ	0,99			
Substitution of primary copper with net scrap (kg)	kg	3,75			
Substitution of thermal energy, district heating (MJ)	MJ	14,98			

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	B1	B2	B3
	GWP-total	kg CO ₂ -eq	7,89E+01	1,41E+00	1,79E+00	1,23E+00	1,70E+00	0	0	0
	GWP-fossil	kg CO ₂ -eq	7,72E+01	1,41E+00	1,24E+00	1,23E+00	1,65E+00	0	0	0
	GWP-biogenic	kg CO ₂ -eq	1,71E+00	5,81E-04	2,15E-01	5,10E-04	3,85E-02	0	0	0
	GWP-luluc	kg CO ₂ -eq	6,42E-02	5,04E-04	3,38E-01	4,39E-04	8,08E-03	0	0	0
	ODP	kg CFC11 -eq	4,46E-06	3,19E-07	2,96E-07	2,79E-07	1,08E-07	0	0	0
	AP	mol H ⁺ -eq	8,18E+00	4,37E-03	3,82E-03	3,54E-03	1,64E-01	0	0	0
	EP-FreshWater	kg P -eq	8,06E-02	1,12E-05	3,37E-05	9,85E-06	1,61E-03	0	0	0
	EP-Marine	kg N -eq	2,64E-01	8,83E-04	1,33E-03	7,01E-04	5,34E-03	0	0	0
	EP-Terrestrial	mol N -eq	3,80E+00	9,87E-03	1,34E-02	7,84E-03	7,66E-02	0	0	0
	POCP	kg NMVOC -eq	1,20E+00	3,66E-03	3,35E-03	3,00E-03	2,43E-02	0	0	0
	ADP-minerals&metals ¹	kg Sb-eq	2,25E-02	3,87E-05	6,31E-06	3,41E-05	4,52E-04	0	0	0
	ADP-fossil ¹	MJ	9,21E+02	2,13E+01	6,57E+01	1,86E+01	2,06E+01	0	0	0
	WDP ¹	m ³	2,49E+01	2,05E+01	1,01E+04	1,80E+01	2,04E+02	0	0	0

Indicator		Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
	GWP-total	kg CO ₂ -eq	0	0	8,09E-03	0	0	5,29E-01	1,53E+00	1,23E-01	-9,11E+00
	GWP-fossil	kg CO ₂ -eq	0	0	7,54E-03	0	0	5,29E-01	1,53E+00	1,23E-01	-9,06E+00
	GWP-biogenic	kg CO ₂ -eq	0	0	1,38E-04	0	0	2,19E-04	2,40E-05	6,21E-06	-4,19E-02
	GWP-luluc	kg CO ₂ -eq	0	0	4,13E-04	0	0	1,88E-04	4,25E-06	2,29E-05	-1,25E-02
	ODP	kg CFC11 -eq	0	0	8,15E-10	0	0	1,20E-07	2,37E-09	1,73E-08	-6,33E-03
	AP	mol H ⁺ -eq	0	0	3,48E-05	0	0	1,52E-03	2,72E-04	4,76E-04	-1,51E+00
	EP-FreshWater	kg P -eq	0	0	4,98E-07	0	0	4,22E-06	2,16E-07	1,07E-06	-1,02E-02
	EP-Marine	kg N -eq	0	0	5,49E-06	0	0	3,01E-04	1,30E-04	2,40E-04	-6,21E-02
	EP-Terrestrial	mol N -eq	0	0	7,37E-05	0	0	3,36E-03	1,36E-03	1,92E-03	-9,62E-01
	POCP	kg NMVOC -eq	0	0	1,73E-05	0	0	1,29E-03	3,26E-04	5,57E-04	-2,61E-01
	ADP-minerals&metals ¹	kg Sb-eq	0	0	1,17E-07	0	0	1,46E-05	1,17E-07	4,67E-07	-8,44E-03
	ADP-fossil ¹	MJ	0	0	2,04E-01	0	0	7,99E+00	1,61E-01	1,41E+00	-8,14E+01
	WDP ¹	m ³	0	0	1,57E+01	0	0	7,73E+00	9,43E-01	3,42E+01	4,76E+02

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 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

"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	B1	B2	B3
 PM	Disease incidence	1,43E-05	8,58E-08	6,18E-08	7,55E-08	2,90E-07	0	0	0
 IRP ²	kgBq U235 -eq	1,85E+00	9,29E-02	2,18E+00	8,15E-02	8,46E-02	0	0	0
 ETP-fw ¹	CTUe	6,14E+04	1,57E+01	2,86E+01	1,38E+01	1,28E+03	0	0	0
 HTP-c ¹	CTUh	1,50E-06	0,00E+00	8,28E-10	0,00E+00	3,00E-08	0	0	0
 HTP-nc ¹	CTUh	1,34E-04	1,72E-08	1,88E-08	1,51E-08	2,68E-06	0	0	0
 SQP ¹	dimensionless	7,78E+02	1,48E+01	2,65E+01	1,30E+01	1,67E+01	0	0	0

Indicator	Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
 PM	Disease incidence	0	0	1,84E-10	0	0	3,24E-08	1,15E-09	8,35E-09	-3,06E-06
 IRP ²	kgBq U235 -eq	0	0	4,64E-03	0	0	3,49E-02	3,69E-04	9,21E-03	-1,07E-01
 ETP-fw ¹	CTUe	0	0	2,55E-01	0	0	5,92E+00	1,93E+00	2,38E+03	-1,39E+04
 HTP-c ¹	CTUh	0	0	6,00E-12	0	0	0,00E+00	6,50E-11	1,11E-10	-1,96E-07
 HTP-nc ¹	CTUh	0	0	1,56E-10	0	0	6,47E-09	2,81E-09	2,03E-09	-1,68E-05
 SQP ¹	dimensionless	0	0	1,53E-01	0	0	5,59E+00	2,67E-02	2,73E+00	-1,84E+02

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 = Potential Soil Quality Index (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	B1	B2	B3	
PERE	MJ	1,25E+02	3,03E-01	3,57E+01	2,67E-01	3,23E+00	0	0	0	
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0	0	
PERT	MJ	1,25E+02	3,03E-01	3,57E+01	2,67E-01	3,23E+00	0	0	0	
PENRE	MJ	8,90E+02	2,13E+01	6,59E+01	1,86E+01	2,00E+01	0	0	0	
PENRM	MJ	3,27E+01	0,00E+00	0,00E+00	0,00E+00	3,12E-02	0	0	0	
PENRT	MJ	9,23E+02	2,13E+01	6,59E+01	1,86E+01	2,00E+01	0	0	0	
SM	kg	2,12E+00	0,00E+00	0,00E+00	0,00E+00	4,28E-02	0	0	0	
RSF	MJ	5,79E-01	1,08E-02	1,22E-01	9,55E-03	1,45E-02	0	0	0	
NRSF	MJ	1,43E+00	3,87E-02	-1,80E-01	3,41E-02	2,64E-02	0	0	0	
FW	m ³	1,32E+00	2,27E-03	8,64E-02	1,99E-03	2,83E-02	0	0	0	

Indicator	Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	0	0	2,00E-01	0	0	1,14E-01	7,81E-03	1,85E-01	-3,98E+01
PERM	MJ	0	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	0	0	2,00E-01	0	0	1,14E-01	7,81E-03	1,85E-01	-3,98E+01
PENRE	MJ	0	0	2,07E-01	0	0	7,99E+00	1,61E-01	1,41E+00	-8,14E+01
PENRM	MJ	0	0	0,00E+00	0	0	0,00E+00	-3,12E+01	0,00E+00	0,00E+00
PENRT	MJ	0	0	2,07E-01	0	0	7,99E+00	-3,10E+01	1,41E+00	-8,14E+01
SM	kg	0	0	0,00E+00	0	0	0,00E+00	0,00E+00	1,93E-02	2,63E+00
RSF	MJ	0	0	2,02E-03	0	0	4,09E-03	1,76E-04	3,83E-03	2,48E-01
NRSF	MJ	0	0	0,00E+00	0	0	1,46E-02	0,00E+00	1,07E-03	8,42E-02
FW	m ³	0	0	9,11E-04	0	0	8,55E-04	1,11E-03	1,84E-03	-2,29E-01

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 = Net use of 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	B1	B2	B3	
	HWD	kg	7,33E-01	1,09E-03	2,68E-01	9,62E-04	2,31E-02	0	0	0	
	NHWD	kg	2,42E+01	1,03E+00	5,69E-01	9,07E-01	6,24E-01	0	0	0	
	RWD	kg	1,88E-03	1,45E-04	9,70E-04	1,27E-04	6,27E-05	0	0	0	
Indicator		Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
	HWD	kg	0	0	1,91E-05	0	0	4,12E-04	0,00E+00	1,51E-01	-1,02E-01
	NHWD	kg	0	0	1,26E-03	0	0	3,89E-01	0,00E+00	4,49E+00	-4,35E+00
	RWD	kg	0	0	2,13E-06	0	0	5,44E-05	0,00E+00	9,81E-06	-9,66E-05

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

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

*INA Indicator Not Assessed

End of life - Output flow											
Indicator		Unit	A1	A2	A3	A4	A5	B1	B2	B3	
	CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0	0	
	MFR	kg	0,00E+00	0,00E+00	1,17E-02	0,00E+00	1,16E-01	0	0	0	
	MER	kg	0,00E+00	0,00E+00	1,08E+00	0,00E+00	1,17E-02	0	0	0	
	EEE	MJ	0,00E+00	0,00E+00	6,33E-01	0,00E+00	3,26E-02	0	0	0	
	EET	MJ	0,00E+00	0,00E+00	9,57E+00	0,00E+00	4,93E-01	0	0	0	
Indicator		Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
	CRU	kg	0	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MFR	kg	0	0	0,00E+00	0	0	0,00E+00	5,77E+00	8,83E-05	-1,03E-01
	MER	kg	0	0	0,00E+00	0	0	0,00E+00	5,85E-01	4,87E-04	-1,35E-02
	EEE	MJ	0	0	0,00E+00	0	0	0,00E+00	9,90E-01	4,40E-03	-3,31E-02
	EET	MJ	0	0	0,00E+00	0	0	0,00E+00	1,50E+01	6,65E-02	-5,01E-01

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

"Reading example: 9,0 E-03 = 9,0*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 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	Source	Amount	Unit
Electricity, renewable with guarantee of origin, low voltage, Sweden (kWh) - NKT	ecoinvent 3.6	114,84	g CO ₂ -eq/kWh

Dangerous substances

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

Indoor environment

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products										
Indicator	Unit	A1	A2	A3	A4	A5	B1	B2	B3	
GWPIOBC	kg CO ₂ -eq	7,88E+01	1,41E+00	1,74E+00	1,23E+00	1,69E+00	0	0	0	
Indicator	Unit	B4	B5	B6	B7	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	0	0	1,10E-02	0	0	5,29E-01	1,53E+00	6,79E-02	-4,35E+00

GWPI-IOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

Bibliography

ISO 14025:2010. Environmental labels and declarations - Type III environmental declarations - Principles and procedures. International Organization for Standardization.

ISO 14044:2006. Environmental management - Life cycle assessment - Requirements and guidelines. International Organization for Standardization.

EN 15804:2012+A2:2019. Environmental product declaration - Core rules for the product category of construction products. European Committee for Standardization.

ISO 21930:2017. Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products. International Organization for Standardization.

EN 50693:2019. Product category rules for life cycle assessments of electronic and electrical products and systems. European Committee for Standardization.

Ecoinvent v3, 2019. Allocation, cut-off by classification. Swiss Centre of Life Cycle Inventories.

Iversen et al., (2021). eEPD v2021.09, background information for EPD generator tool system verification, LCA.no. Report number: 07.21. System verification report.

Philis et al., (2022). EPD generator for NPCR 027 part B for electrical wires and cables, background information for EPD generator application and LCA data, LCA.no Report number: 03.22. PCR verification report.

EPD Norway (2022). NPCR Part A: Construction products and services. The Norwegian EPD foundation. Version 2.0 published 24.03.2021.

EPD Norway (2022). NPCR 027 Part B for electrical cables and wires. The Norwegian EPD foundation. Version 2.0 published 01.03.2022.

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