



Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Tec-Flex 5G10 0,6/1,0kV RV-K





The Norwegian EPD Foundation

Owner of the declaration: TECCON Norge AS

Product

Tec-Flex 5G10 0,6/1,0kV RV-K

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-9731-9648

Registration number:

NEPD-9731-9648

Issue date:

10.04.2025

Valid to:

10.04.2030

EPD software:

LCAno EPD generator ID: 864121



General information

Product

Tec-Flex 5G10 0,6/1,0kV RV-K

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-9731-9648

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 Tec-Flex 5G10 0,6/1,0kV RV-K

Declared unit with option:

A1, A2, A3, A4, A5, B6, C1, C2, C3, C4, D

Functional unit:

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:

TECCON Norge AS Contact person: Jan Vestergaard Phone: 51 73 37 00 e-mail: jan.vestergaard@teccon.no

Manufacturer:

TECCON Norge AS Mekjarvik 18 4072 Randaberg, Norway

Place of production:

Teccon production site Léon (Spain)

, Spain

Management system:

Eco-lighthouse: 4247

Organisation no:

986 452 125

Issue date:

10.04.2025

Valid to:

10.04.2030

Year of study:

2024

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: NEPDT155

Developer of EPD: Jan Vestergaard, Teccon Norge AS

Reviewer of company-specific input data and EPD: Joruly Søbstad

Approved:

Håkon Hauan, CEO EPD-Norge



Product

Product description:

Tec Flex RV-K 0,6/1 kV power cables are specially indicated for its use in distribution networks, power stations, industries or buildings, and electrical installations in steel ships.

For electrical energy transport and distribution, distribution networks, protected or not. For indoor and outdoor installations. Non-suitable for facilities of feeding of submerged pumps

Surface mounted (directly installed or on cable trays, cable ladders, cleats, brackets or in cable ducting (conduit, pipes or similar closed systems)). Embedded (directly or in cable ducting).

In building voids and cavities (directly or on cable trays, cable ladders, in cable ducting).

Buried in ground (directly or in conduit)

Product specification

General: UNE 21-123-91; IEC 60502-21-123-91/1; HD 603-1

Flexible installation cable 0,6/1,0kV

Materials	kg	%
Copper conductor	0,40	66,66
Plastic - Polyethylene	0,054	8,82
Plastic - Polyvinyl chloride (PVC)	0,15	24,50
Total	0,61	100,00
Packaging	kg	%
Packaging - Wood	0,09	100,00
Total incl. packaging	0,70	100,00

Technical data:

Cable

Standard IEC 60502-1

Conductor Annealed electrolytic flexible multi-stranded copper conductor, class 5, IEC 60228

Insulation XLPE - according to standard IEC 60502-1

Coloured According to HD 308 S2

Colour code Cenelec. Yellow/Green; Blue, brown, Black, Grey

Bedding PVC

Jacket PVC, White or Grey. UV stabilized. (PVC type ST2 according to IEC 60502-1)

Marking RV-K 0,6/1,0kV xx G mm² Year/lot

Rated Voltage U0/U 0,6/1,0kV

Volatge test 3500V

Service temp 90° C

Short circuit temp 250° C

Fire performance EN 50575:2014+A1:2016

Flame retardant EN 60332-1-2

CPR EN50575 Eca

Temperature – service -25- 60°

Temperature – installation 0 - 50°

Bending radius 10 x D

Marking - Approvals - directives

RohS

Low Voltage Directive

CPR compliant

Marine approval

Registered for use in Swan Buildings

Market:

Nordic

Reference service life, product

30Y+

Reference service life, building or construction works

30Y+

LCA: Calculation rules



Declared unit:

1 m Tec-Flex 5G10 0,6/1,0kV RV-K

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.

All major materials have been included. Substance representing < 1% have not been included. This include folio film for packaging!

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. The allocation is made in accordance with the guidelines given in EN 15804.

Raw material - Information derived from manufactory and from a LCA generator

Processing: Derived from actual measurements during production of the individual units/stages

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.

Data from material supplier and the LCA generator has been accepted "As-Is"

Data from processing TECCON in-house has been repeated ongoingly without major deviations. Figures given in document are worst case values.

Materials	Source	Data quality	Year
Copper conductor	ecoinvent 3.6	Database	2019
Packaging - Wood	Modified ecoinvent 3.6	Database	2019
Plastic - Polyethylene	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)

	P	roduct sta	ge		uction ion stage	Use stage End of life stage Beyond the syster boundaries								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
Ì	A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
Ì	Х	Х	Χ	X	Х	MND	MND	MND	MND	MND	Х	MND	X	Х	Х	Х	X

System boundary:

Cradle to Gate.

The following stages have been declared: A1-A4

The flowchart below illustrates the system boundaries of the analysis:

		Colifix												
Drum	A1	A2			A3			A4		A5		B1-B7	C1-C4	D
						Packaging solution processing "Drum delivery"		Transport from TECCON to supplier		No significant impact accounted for in EPD		No significant impact accounted for in EPD	Transport to ne are st Waste Treatment Plant The individuel pioducts parts plastic and copper - will be transferred to recycling points	Benefit from recycling points to specifict users
						†								
		Transport from supplier to TECCON			Prepartion / cut - at TECCON									

Additional technical information:

Article 101011946 Tec-Flex 5G10 0,6/1,0kV RV-K cable represent the maximum energy consumption from the product family below - from a production volume perspective as follow:

Tec-Flex 3G10 RV-K Black 1011940

Tec-Flex 3G10 RV-K White 1010477

Tec-Flex 3G16 RV-K Black 1011941

Tec-Flex 3G16 RV-K White 1010482

Tec-Flex 4G10 RV-K Black 1011943

Tec-Flex 4G10 RV-K White 1010478

Tec-Flex 4G16 RV-K Black 1011944

Tec-Flex 4G16 RV-K White 1010483

Tec-Flex 4G25 RV-K Black 1011945

Tec-Flex 4g35 RV-K Black 1011951

Tec-Flex 5G10 RV-K White 1011946

Tec-Flex 5G10 RV-K Black 1010479

Tec-Flex 5G16 RV-K White 1011947

Tec-Flex 5g16 RV-K Black 1010484

Tec-Flex 5G25 RV-K Black 1011948

If required individual EPD may be conducted accordingly!



LCA: Scenarios and additional technical information

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

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)	36,7 %	988	0,043	l/tkm	42,48
Assembly (A5)	Unit	Value			
Product loss during installation (percentage of cable)	Units/DU	0,020			
Waste, wood, to average treatment - A5 including transport (kg)	kg	0,090			
Operational energy (B6)	Unit	Value			
Electricity, Norway (kWh)	kWh/DU	0,33			
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)	36,7 %	300	0,043	l/tkm	12,90
Waste processing (C3)	Unit	Value			
Copper to recycling (kg)	kg	0,24			
Waste treatment of polyethylene (PE), incineration with energy recovery and fly ash extraction (kg)	kg	0,027			
Waste treatment of polyvinylchloride (PVC), incineration with energy recovery and fly ash extraction (kg)	kg	0,075			
Disposal (C4)	Unit	Value			
Landfilling of copper (kg)	kg	0,16			
Landfilling of plastic mixture (kg)	kg	0,10			
Landfilling of ashes from incineration of Polyethylene (PE), process per kg ashes and residues (kg)	kg	0,00095			
Landfilling of ashes from incineration of Polyvinylchloride (PVC), process per kg ashes and residues (kg)	kg	0,011			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary copper with net scrap (kg)	kg	0,16			
Substitution of electricity, in Norway (MJ)	MJ	0,12			
Substitution of thermal energy, district heating, in Norway (MJ)	МЈ	1,95			



LCA: Results

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

Environme	ental impact								
	Indicator		Unit		A1	A2	A3	A4	A5
	GWP-total		kg CO ₂ -€	eq	2,42E+00	8,39E-02	1,57E-01	1,13E-01	1,99E-01
	GWP-fossil	GWP-fossil			2,51E+00	8,38E-02	1,55E-01	1,13E-01	6,46E-02
•	GWP-biogenic	GWP-biogenic			-8,91E-02	3,24E-05	4,47E-04	4,69E-05	1,35E-01
•	GWP-Iuluc		kg CO ₂ -	eq	2,61E-03	3,56E-05	1,39E-03	4,03E-05	8,24E-05
(3)	ODP		kg CFC11	-eq	3,49E-07	1,88E-08	1,70E-08	2,57E-08	8,71E-09
C.	AP		mol H+ -	eq	1,05E-01	7,41E-04	1,40E-03	3,26E-04	2,17E-03
-	EP-FreshWater		kg P -ec	7	8,56E-04	6,05E-07	7,41E-06	9,05E-07	1,73E-05
	EP-Marine		kg N -ed	9	6,97E-03	1,72E-04	1,99E-04	6,44E-05	1,58E-04
-	EP-Terrestial		mol N -e	eq	1,02E-01	1,92E-03	2,25E-03	7,21E-04	2,23E-03
	POCP		kg NMVOC	:-eq	2,63E-02	5,51E-04	6,03E-04	2,76E-04	5,80E-04
	ADP-minerals&metals ¹		kg Sb-ed	9	9,19E-04	1,97E-06	1,27E-06	3,13E-06	1,86E-05
	ADP-fossil ¹		MJ		3,94E+01	1,23E+00	3,60E+00	1,71E+00	9,53E-01
\wedge	= 1		2		1 725 . 02	1 025 : 00	0.105 . 01	1.000 .00	2.025 . 00
<u>%</u>	WDP ¹		m^3		1,73E+02	1,02E+00	-8,19E+01	1,66E+00	2,03E+00
(%)	WDP '		Unit m ³	В6	1,73E+02	C2	-8, 19E+01	C4	2,03E+00
(%)				B6 8,19E-03					
	Indicator		Unit		C1	C2	C3	C4	D
	Indicator GWP-total		Unit kg CO ₂ -eq	8,19E-03	C1 0	C2 3,44E-02	C3 2,32E-01	C4 1,69E-02	D -4,15E-01
	Indicator GWP-total GWP-fossil		Unit kg CO ₂ -eq kg CO ₂ -eq	8,19E-03 7,94E-03	C1 0	C2 3,44E-02 3,44E-02	C3 2,32E-01 2,32E-01	C4 1,69E-02 1,69E-02	D -4,15E-01 -4,13E-01
	Indicator GWP-total GWP-fossil GWP-biogenic		Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	8,19E-03 7,94E-03 2,19E-04	C1 0 0	C2 3,44E-02 3,44E-02 1,42E-05	C3 2,32E-01 2,32E-01 6,19E-05	C4 1,69E-02 1,69E-02 2,44E-06	D -4,15E-01 -4,13E-01 -1,89E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc		Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	8,19E-03 7,94E-03 2,19E-04 3,27E-05	0 0 0 0	C2 3,44E-02 3,44E-02 1,42E-05 1,22E-05	C3 2,32E-01 2,32E-01 6,19E-05 1,18E-05	C4 1,69E-02 1,69E-02 2,44E-06 1,49E-06	D -4,15E-01 -4,13E-01 -1,89E-03 -8,14E-04
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP		Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	8,19E-03 7,94E-03 2,19E-04 3,27E-05 5,44E-10	0 0 0 0 0	C2 3,44E-02 3,44E-02 1,42E-05 1,22E-05 7,79E-09	C3 2,32E-01 2,32E-01 6,19E-05 1,18E-05 5,00E-09	C4 1,69E-02 1,69E-02 2,44E-06 1,49E-06 1,16E-09	D -4,15E-01 -4,13E-01 -1,89E-03 -8,14E-04 -8,25E-04
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP		Unit kg CO ₂ -eq mol H+ -eq	8,19E-03 7,94E-03 2,19E-04 3,27E-05 5,44E-10 6,20E-05	0 0 0 0 0 0	C2 3,44E-02 3,44E-02 1,42E-05 1,22E-05 7,79E-09 9,89E-05	C3 2,32E-01 2,32E-01 6,19E-05 1,18E-05 5,00E-09 9,71E-05	C4 1,69E-02 1,69E-02 2,44E-06 1,49E-06 1,16E-09 3,41E-05	D -4,15E-01 -4,13E-01 -1,89E-03 -8,14E-04 -8,25E-04 -6,75E-02
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater		kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq	8,19E-03 7,94E-03 2,19E-04 3,27E-05 5,44E-10 6,20E-05 5,71E-07	0 0 0 0 0 0	C2 3,44E-02 3,44E-02 1,42E-05 1,22E-05 7,79E-09 9,89E-05 2,75E-07	C3 2,32E-01 2,32E-01 6,19E-05 1,18E-05 5,00E-09 9,71E-05 4,49E-07	C4 1,69E-02 1,69E-02 2,44E-06 1,49E-06 1,16E-09 3,41E-05 9,41E-08	D -4,15E-01 -4,13E-01 -1,89E-03 -8,14E-04 -8,25E-04 -6,75E-02 -4,55E-04
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine		kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq	8,19E-03 7,94E-03 2,19E-04 3,27E-05 5,44E-10 6,20E-05 5,71E-07 6,82E-06	0 0 0 0 0 0 0	C2 3,44E-02 3,44E-02 1,42E-05 1,22E-05 7,79E-09 9,89E-05 2,75E-07 1,96E-05	C3 2,32E-01 2,32E-01 6,19E-05 1,18E-05 5,00E-09 9,71E-05 4,49E-07 2,61E-05	C4 1,69E-02 1,69E-02 2,44E-06 1,49E-06 1,16E-09 3,41E-05 9,41E-08 2,38E-05	D -4,15E-01 -4,13E-01 -1,89E-03 -8,14E-04 -8,25E-04 -6,75E-02 -4,55E-04 -2,80E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial		kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq	8,19E-03 7,94E-03 2,19E-04 3,27E-05 5,44E-10 6,20E-05 5,71E-07 6,82E-06 8,87E-05	0 0 0 0 0 0 0 0	C2 3,44E-02 3,44E-02 1,42E-05 1,22E-05 7,79E-09 9,89E-05 2,75E-07 1,96E-05 2,19E-04	C3 2,32E-01 2,32E-01 6,19E-05 1,18E-05 5,00E-09 9,71E-05 4,49E-07 2,61E-05 2,80E-04	C4 1,69E-02 1,69E-02 2,44E-06 1,49E-06 1,16E-09 3,41E-05 9,41E-08 2,38E-05 1,32E-04	D -4,15E-01 -4,13E-01 -1,89E-03 -8,14E-04 -8,25E-04 -6,75E-02 -4,55E-04 -2,80E-03 -4,32E-02
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP		kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq g NMVOC -eq	8,19E-03 7,94E-03 2,19E-04 3,27E-05 5,44E-10 6,20E-05 5,71E-07 6,82E-06 8,87E-05 2,39E-05	C1 0 0 0 0 0 0 0 0	C2 3,44E-02 1,42E-05 1,22E-05 7,79E-09 9,89E-05 2,75E-07 1,96E-05 2,19E-04 8,38E-05	C3 2,32E-01 2,32E-01 6,19E-05 1,18E-05 5,00E-09 9,71E-05 4,49E-07 2,61E-05 2,80E-04 7,71E-05	C4 1,69E-02 1,69E-02 2,44E-06 1,49E-06 1,16E-09 3,41E-05 9,41E-08 2,38E-05 1,32E-04 3,94E-05	D -4,15E-01 -4,13E-01 -1,89E-03 -8,14E-04 -8,25E-04 -6,75E-02 -4,55E-04 -2,80E-03 -4,32E-02 -1,17E-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

Remarks to environmental impacts

[&]quot;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



Additional e	Additional environmental impact indicators Indicator Unit A1 A2 A3 A4 A5												
	Indicator	Unit	Unit				A4	A5					
	PM	Disease incidence		2,90E-07	4,09E-09	3,23E-09	6,94E-09	6,35E-09					
	IRP ²	kgBq U235 -eq		1,54E-01	5,35E-03	3,88E-02	7,49E-03	4,24E-03					
	ETP-fw ¹	CTUe		1,23E+03	8,76E-01	2,99E+00	1,27E+00	2,70E+01					
40 x	HTP-c ¹	CTUh		2,18E-08	0,00E+00	7,70E-11	0,00E+00	4,42E-10					
44 B	HTP-nc ¹	CTUh		1,66E-06	8,19E-10	2,61E-09	1,39E-09	3,35E-08					
	SQP ¹	dimensionless		2,77E+01	7,36E-01	7,75E-01	1,20E+00	6,30E-01					
I	ndicator	Unit	В6	C1	C2	C3	C4	D					
	PM	Disease incidence	4,45E-10	0	2,11E-09	6,05E-10	5,47E-10	-1,40E-07					
	IRP ²	kgBq U235 -eq	1,97E-03	0	2,27E-03	9,70E-04	5,71E-04	-5,49E-03					
6	ETP-fw ¹	CTUe	4,94E-01	0	3,86E-01	9,49E+00	1,01E+02	-6,21E+02					
40.*	HTP-c ¹	CTUh	2,40E-11	0	0,00E+00	2,30E-11	8,00E-12	-8,76E-09					
% <u>₽</u>	HTP-nc ¹	CTUh	5,55E-10	0	4,21E-10	2,30E-09	1,99E-10	-7,51E-07					

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)

5,46E-02

3,64E-01

7,27E-02

2,41E-01

-8,95E+00

dimensionless

SOP¹

[&]quot;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		U	nit	A1	A2	A3	A4	A5
Ş.	PERE		N	MJ	7,33E+00	1,59E-02	9,46E-01	2,45E-02	1,68E-01
	PERM		N	MJ	1,25E+00	0,00E+00	0,00E+00	0,00E+00	-1,22E+00
Ţ,	PERT	PERT		MJ	8,58E+00	1,59E-02	9,46E-01	2,45E-02	-1,06E+00
	PENRE	PENRE		MJ	3,41E+01	1,23E+00	3,60E+00	1,71E+00	8,47E-01
<u>An</u>	PENRM	PENRM		MJ	5,52E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IA	PENRT		N	MJ	3,96E+01	1,23E+00	3,60E+00	1,71E+00	8,47E-01
<u></u>	SM		k	кg	7,90E-02	0,00E+00	0,00E+00	0,00E+00	1,60E-03
	RSF		N	MJ	1,96E-01	5,54E-04	6,26E-03	8,77E-04	4,10E-03
	NRSF		N	MJ		2,35E-03	1,68E-02	3,14E-03	8,04E-04
(%)	FW		n	n ³	4,62E-02	1,19E-04	1,59E-03	1,83E-04	1,08E-03
I	ndicator	Į	Unit	В6	C1	C2	C3	C4	D
i i	ndicator PERE		Unit MJ	B6 1,40E+00	C1 0	C2 7,45E-03	C3 2,54E-02	C4 1,02E-02	D -2,44E+00
Ğ	PERE		MJ	1,40E+00	0	7,45E-03	2,54E-02	1,02E-02	-2,44E+00
**************************************	PERE PERM		M1 M1	1,40E+00 0,00E+00	0	7,45E-03 0,00E+00	2,54E-02 0,00E+00	1,02E-02 0,00E+00	-2,44E+00 0,00E+00
.€ 2 .⊊.	PERE PERM PERT		W1 W1	1,40E+00 0,00E+00 1,40E+00	0 0 0	7,45E-03 0,00E+00 7,45E-03	2,54E-02 0,00E+00 2,54E-02	1,02E-02 0,00E+00 1,02E-02	-2,44E+00 0,00E+00 -2,44E+00
€ 3 ~£.	PERE PERM PERT PENRE		M1 M1 M1 M1	1,40E+00 0,00E+00 1,40E+00 1,09E-01	0 0 0 0	7,45E-03 0,00E+00 7,45E-03 5,20E-01	2,54E-02 0,00E+00 2,54E-02 2,03E-01	1,02E-02 0,00E+00 1,02E-02 9,54E-02	-2,44E+00 0,00E+00 -2,44E+00 -3,75E+00
	PERE PERM PERT PENRE PENRM		мл мл мл	1,40E+00 0,00E+00 1,40E+00 1,09E-01 0,00E+00	0 0 0 0	7,45E-03 0,00E+00 7,45E-03 5,20E-01 0,00E+00	2,54E-02 0,00E+00 2,54E-02 2,03E-01 -5,52E+00	1,02E-02 0,00E+00 1,02E-02 9,54E-02 0,00E+00	-2,44E+00 0,00E+00 -2,44E+00 -3,75E+00 0,00E+00
	PERE PERM PERT PENRE PENRM PENRT		мл мл мл мл	1,40E+00 0,00E+00 1,40E+00 1,09E-01 0,00E+00 1,09E-01	0 0 0 0 0	7,45E-03 0,00E+00 7,45E-03 5,20E-01 0,00E+00 5,20E-01	2,54E-02 0,00E+00 2,54E-02 2,03E-01 -5,52E+00 -5,32E+00	1,02E-02 0,00E+00 1,02E-02 9,54E-02 0,00E+00 9,54E-02	-2,44E+00 0,00E+00 -2,44E+00 -3,75E+00 0,00E+00 -3,75E+00
	PERE PERM PERT PENRE PENRM PENRT SM		MJ MJ MJ MJ MJ kg	1,40E+00 0,00E+00 1,40E+00 1,09E-01 0,00E+00 1,09E-01 0,00E+00	0 0 0 0 0 0	7,45E-03 0,00E+00 7,45E-03 5,20E-01 0,00E+00 5,20E-01 0,00E+00	2,54E-02 0,00E+00 2,54E-02 2,03E-01 -5,52E+00 -5,32E+00 0,00E+00	1,02E-02 0,00E+00 1,02E-02 9,54E-02 0,00E+00 9,54E-02 8,26E-04	-2,44E+00 0,00E+00 -2,44E+00 -3,75E+00 0,00E+00 -3,75E+00 1,17E-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; 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		U	nit	A1	A2	A3	A4	A5
	HWD		k	g	3,23E-02	6,14E-05	2,01E-04	8,83E-05	8,13E-04
Ū	NHWD		k	g	9,03E-01	4,97E-02	1,42E-02	8,33E-02	1,17E-01
<u> </u>	RWD		kg		1,40E-04	8,39E-06	2,77E-05	1,17E-05	3,78E-06
In	dicator	I	Unit	В6	C1	C2	C3	C4	D
Ā	HWD		kg	6,96E-05	0	2,68E-05	0,00E+00	8,00E-03	-4,55E-03
Ū	NHWD		kg	8,35E-03	0	2,53E-02	0,00E+00	2,79E-01	-1,97E-01
3	RWD		kg	9,70E-07	0	3,54E-06	0,00E+00	5,76E-07	-4,88E-06

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								
Ind	icator	Un	it	A1	A2	A3	A4	A5
@▷	CRU	kg	kg		0,00E+00	0,00E+00	0,00E+00	0,00E+00
&>	MFR	kg	kg		0,00E+00	0,00E+00	0,00E+00	4,90E-03
Þ₹	MER	kg	ı	1,60E-04	0,00E+00	0,00E+00	0,00E+00	9,20E-02
50	EEE	M.	МЈ		0,00E+00	0,00E+00	0,00E+00	6,52E-02
▶	EET	M.	J	4,49E-03	0,00E+00	0,00E+00	0,00E+00	9,86E-01
Indicato	or	Unit	В6	C1	C2	C3	C4	D
∅ >	CRU	kg	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
&▷	MFR	kg	0,00E+00	0	0,00E+00	2,45E-01	1,07E-05	-4,59E-03
DF	MER	kg	0,00E+00	0	0,00E+00	1,02E-01	2,08E-05	-6,05E-04
5⊳	EEE	MJ	0,00E+00	0	0,00E+00	1,29E-01	1,98E-04	-1,48E-03
D	EET	МЈ	0,00E+00	0	0,00E+00	1,95E+00	2,99E-03	-2,24E-02

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	3,72E-02

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, Spain (kWh)	ecoinvent 3.6	337,33	g CO2-eq/kWh

Dangerous substances

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

Indoor environment

No effect on in-door environment

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products								
Indicator	Unit		A1	A2	A3	A4	A5	
GWPIOBC	kg CO ₂ -eq		2,55E+00	8,39E-02	1,63E-01	1,13E-01	6,53E-02	
Indicator	Unit	В6	C1	C2	C3	C4	D	
GWPIOBC	kg CO ₂ -eq	8,17E-03	0	3,44E-02	2,32E-01	5,84E-03	-2,02E-01	

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.



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