

ENVIRONMENTAL PRODUCT DECLARATION

in accordance with ISO 14025, ISO 21930 and EN 15804

| | |
|--------------------------------|------------------------------|
| Owner of the declaration: | Elektroskandia Norge AS |
| Program operator: | The Norwegian EPD Foundation |
| Publisher: | The Norwegian EPD Foundation |
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Cable management systems - Pre galvanised steel (Sendzimir)

Elektroskandia Norge AS

www.epd-norge.no



 **Elektroskandia**
 Norge REXEL GROUP



General information

Product:

Cable management systems - Pre galvanised steel (Sendzimir)

Program operator:

The Norwegian EPD Foundation
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Declaration number:

NEPD-2942-1632-EN

ECO Platform reference number:**This declaration is based on Product Category Rules:**

CEN Standard EN 15804:2012+A1:2013 serves as core PCR
NPCR 028 Part B for Cable pipes

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 Cable management systems - Pre galvanised steel (Sendzimir)

Declared unit with option:

A1,A2,A3,A4,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. Individual third party verification of each EPD is not required when the EPD tool is i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPDNorway, and iii) 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 EPDNorway's procedures and guidelines for verification and approval of EPD tools.

Fredrik Moltu Johnsen, Norsus AS

(no signature required)

Owner of the declaration:

Elektroskandia Norge AS
Contact person: Pål Kristiansen
Phone: +47 97 66 22 12
e-mail: pkrist@elektroskandia.no

Manufacturer:

Elis Elektro AS
Jerikoveien 16 1067 Oslo
Norway

Place of production:

MP Bolagen AB
Box 3 Storgatan 25D 574 21 Vetlanda
Sweden

Management system:

ISO 14001, ISO 9001

Organisation no:

977 454 700

Issue date: 29.06.2021**Valid to:** 29.06.2026**Year of study:**

2020

Comparability:

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

Development and verification of EPD:

The declaration has been developed and verified using EPD tool lca.tools ver EPD2020.11, developed by LCA.no AS. The EPD tool is integrated into the company's environmental management system, and has been approved by EPD-Norway

Developer of EPD:

Nanna Wister

Reviewer of company-specific input data and EPD:

Stig Linneberg

Approved:

Sign



Håkon Hauan, CEO EPD-Norge

Product

Product description:

Elis Elektro AS provides a wide range of products for support, cable ladders, cable trays and accessories. This EPD covers the products from MP bolagen AB made from pre galvanized carbon steel. Pre galvanized steel has been subjected to a process covering sheet steel with a thin layer of zinc, which gives a bright surface. This zinc layer of 20 µm thickness is in accordance with ISO EN 10346, offers protection due to its low electrode potential and slow corrosion rate. Products in pre galvanized steel are suited for installation in environments with low corrosion rate.

Product specification

The products covered by this EPD are produced at MP bolagen Industri AB in Ekenässjön, Sverige. The steel grade sheets used for these products are DX51D and Z275. The manufacturing of these products comprises cutting, punching, forming and to some extent friction welding of the steel input.

| Materials | kg | % |
|-----------|------|--------|
| Steel | 2,40 | 100,00 |
| Total: | 2,40 | |

Technical data:

Market:

Light industrial outfits and building sites.

Reference service life, product

TBA

Reference service life, construction

TBA

LCA: Calculation rules

Declared unit:

1 m Cable management systems - Pre galvanised steel (Sendzimir)

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.

Data quality:

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

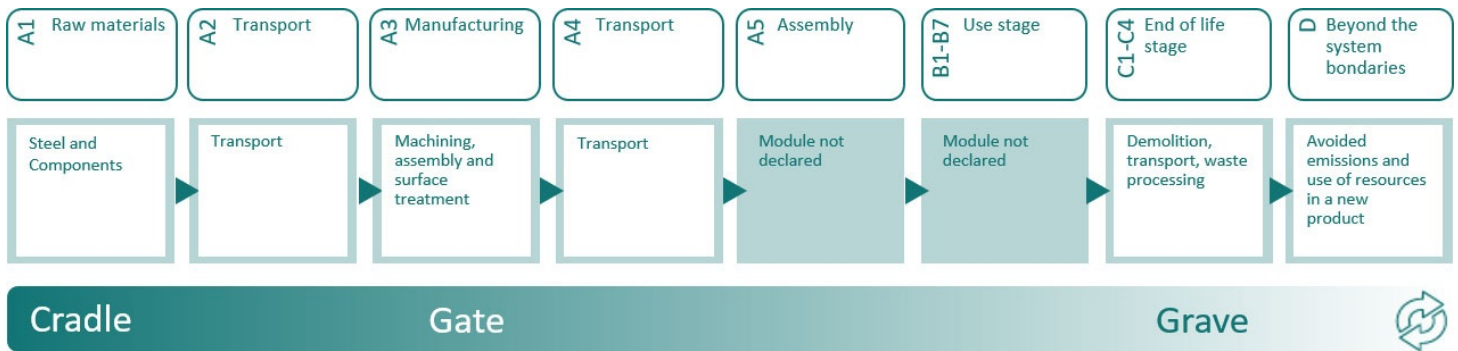
| Materials | Source | Data quality | Year |
|-----------|-----------|--------------|------|
| Steel | S-P-01921 | EPD | 2020 |

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.

System boundary:

In A4, a transport distance from the production to Elektroskandia's warehouse in Langhus was included. A distance of 300 km was added as additional transport to market. In C2, 85 km has been entered as an average distance to the nearest waste management facility in Norway. In C3 metals are sent to recycling. Net benefit of material recycling and energy recovery is given in module D.



Additional technical information:

To see our products covered by Cable Management systems, visit our web-site www.eliselektro.no

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)

| Type | Capacity utilisation (incl. return) % | Type of vehicle | Distance km | Fuel/Energy consumption | Unit | Value (l/t) |
|----------------------|---------------------------------------|-------------------------------------|-------------|-------------------------|-------|-------------|
| Truck | 55,0 % | Truck, lorry over 32 tonnes, EURO 6 | 758 | 0,022606 | l/tkm | 17,14 |
| Railway | | | | | l/tkm | |
| Boat | | | | | l/tkm | |
| Other Transportation | | | | | l/tkm | |

End of Life (C1, C3, C4)

| | Unit | Value |
|---------------------------------------|------|--------|
| Hazardous waste disposed | kg | |
| Collected as mixed construction waste | kg | |
| Reuse | kg | |
| Recycling | kg | 2,3760 |
| Energy recovery | kg | |
| To landfill | kg | 0,0240 |

Transport to waste processing (C2)

| Type | Capacity utilisation (incl. return) % | Type of vehicle | Distance km | Fuel/Energy consumption | Unit | Value (l/t) |
|----------------------|---------------------------------------|-----------------------------------|-------------|-------------------------|-------|-------------|
| Truck | 38,8 % | Truck, lorry 16-32 tonnes, EURO 6 | 85 | 0,043626 | l/tkm | 3,71 |
| Railway | | | | | l/tkm | |
| Boat | | | | | l/tkm | |
| Other Transportation | | | | | l/tkm | |

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Benefits and loads beyond the system boundaries (D)

| | Unit | Value |
|---|------|-------|
| Substitution of primary construction steel, with net scrap steel (kg) | kg | 2,31 |

LCA: Results

LCA results according to the indicators of EN 15804:2013+A1:2013 are presented in the following tables, for the declared unit defined on page 2 of the EPD document. All potential environmental impacts might not be covered by the EN 15804 indicators. This concerns indicators such as noise, electromagnetic radiation, electromagnetic fields and treatment brominated flame retardants.

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

| Product stage | | | Construction installation stage | | User 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 |

Environmental impact

| Parameter | Unit | A1-A3 | A4 | C1 | C2 | C3 | C4 | D |
|-----------|--------------------------------------|----------|----------|----|----------|----------|----------|-----------|
| GWP | kg CO ₂ -eq | 8,00E+00 | 1,51E-01 | 0 | 3,25E-02 | 4,75E-04 | 1,24E-04 | -3,87E+00 |
| ODP | kg CFC11 -eq | 5,76E-08 | 3,09E-08 | 0 | 6,12E-09 | 5,20E-11 | 4,10E-11 | -1,59E-07 |
| POCP | kg C ₂ H ₄ -eq | 1,72E-03 | 2,36E-05 | 0 | 4,92E-06 | 1,30E-07 | 3,80E-08 | -2,70E-03 |
| AP | kg SO ₂ -eq | 1,87E-02 | 3,89E-04 | 0 | 7,64E-05 | 2,96E-06 | 9,07E-07 | -1,73E-02 |
| EP | kg PO ₄ ³⁻ -eq | 2,05E-03 | 5,36E-05 | 0 | 1,00E-05 | 4,56E-07 | 1,60E-07 | -5,76E-03 |
| ADPM | kg Sb -eq | 5,71E-04 | 3,58E-07 | 0 | 1,01E-07 | 3,60E-11 | 2,00E-12 | -7,48E-05 |
| ADPE | MJ | 9,23E+01 | 2,47E+00 | 0 | 4,91E-01 | 4,42E-03 | 3,50E-03 | -3,64E+01 |

GWP Global warming potential; ODP Depletion potential of the stratospheric ozone layer; POCP Formation potential of tropospheric photochemical oxidants; AP Acidification potential of land and water; EP Eutrophication potential; ADPM Abiotic depletion potential for non fossil resources; ADPE Abiotic depletion potential for fossil resources

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

*INA Indicator Not Assessed

Resource use

| Parameter | Unit | A1-A3 | A4 | C1 | C2 | C3 | C4 | D |
|-----------|----------------|----------|----------|----|----------|----------|----------|-----------|
| RPEE | MJ | 8,13E+00 | 4,49E-02 | 0 | 7,25E-03 | 3,67E-02 | 2,86E-05 | -3,28E+00 |
| RPEM | MJ | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| TPE | MJ | 8,13E+00 | 4,49E-02 | 0 | 7,25E-03 | 3,67E-02 | 2,86E-05 | -3,28E+00 |
| NRPE | MJ | 1,01E+02 | 2,55E+00 | 0 | 5,03E-01 | 5,94E-03 | 3,55E-03 | -3,45E+01 |
| NRPM | MJ | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| TRPE | MJ | 1,01E+02 | 2,55E+00 | 0 | 5,03E-01 | 5,94E-03 | 3,55E-03 | -3,45E+01 |
| SM | kg | 8,42E-02 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| RSF | MJ | 1,85E-03 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| NRSF | MJ | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| W | m ³ | 3,06E-03 | 6,03E-04 | 0 | 9,50E-05 | 2,45E-06 | 3,84E-06 | -2,36E-02 |

RPEE Renewable primary energy resources used as energy carrier; RPEM Renewable primary energy resources used as raw materials; TPE Total use of renewable primary energy resources; NRPE Non renewable primary energy resources used as energy carrier; NRPM Non renewable primary energy resources used as materials; TRPE 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; W 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

| Parameter | Unit | A1-A3 | A4 | C1 | C2 | C3 | C4 | D |
|-----------|------|----------|----------|----|----------|----------|----------|-----------|
| HW | kg | 2,06E-01 | 1,36E-06 | 0 | 2,96E-07 | 1,47E-08 | 5,28E-09 | -3,35E-04 |
| NHW | kg | 3,87E-01 | 2,33E-01 | 0 | 2,69E-02 | 4,51E-04 | 2,40E-02 | -6,63E+00 |
| RW | kg | 1,87E-03 | 1,78E-05 | 0 | 3,45E-06 | 4,36E-08 | 2,32E-08 | -1,30E-05 |

HW Hazardous waste disposed; NHW Non hazardous waste disposed; RW Radioactive waste disposed

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

*INA Indicator Not Assessed

End of life - Output flow

| Parameter | Unit | A1-A3 | A4 | C1 | C2 | C3 | C4 | D |
|-----------|------|----------|----------|----|----------|----------|----------|----------|
| CR | kg | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| MR | kg | 1,13E+00 | 0,00E+00 | 0 | 0,00E+00 | 2,38E+00 | 0,00E+00 | 0,00E+00 |
| MER | kg | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| EEE | MJ | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| ETE | MJ | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

CR Components for reuse; MR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy

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

*INA Indicator Not Assessed

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 |
|----------------------|-------------------------|--------|----------------------------|
| El-mix, Sweden (kWh) | ecoinvent 3.4 Alloc Rec | 42,67 | g CO ₂ -ekv/kWh |

Dangerous substances

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

Indoor environment

Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.





EN 15804:2012+A1:2013 Environmental product declaration - Core rules for the product category of construction products.

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NPCR Part A: Construction products and services. Ver. 1.04.2017 EPD-Norge. NPCR 27 Part B for electrical cables and wires or NPCR 28 Part B for cable pipes Ver. 1.02.2020 EPD-Norge.

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