
# ENVIRONMENTAL PRODUCT DECLARATION

## IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Cu Wire
ELIT AS

**EPD HUB, HUB-3750**
Published on 01.08.2025, last updated on 01.08.2025, valid until 31.07.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.

Created with One Click LCA

# GENERAL INFORMATION

## MANUFACTURER

| | |
|---|---|
| Manufacturer | ELIT AS |
| Address | Ulvedalsvegen 2, 2030 Nannestad, Norway |
| Contact details | firmapost@elit.no |
| Website | https://elit.no/ |

## EPD STANDARDS, SCOPE AND VERIFICATION

| | |
|---|---|
| Program operator | EPD Hub, hub@epdhub.com |
| Reference standard | EN 15804:2012+A2:2019/AC:2021 and ISO 14025 |
| PCR | EPD Hub Core PCR Version 1.1, 5 Dec 2023 |
| Sector | Electrical product |
| Category of EPD | Third party verified EPD |
| Parent EPD number | - |
| Scope of the EPD | Cradle to gate with options, A4, and modules C1-C4, D |
| EPD author | Martine Haggren |
| EPD verification | Independent verification of this EPD and data, according to ISO 14025:<br>☐ Internal verification ☑ External verification |
| EPD verifier | Haiha Nguyen, as an authorized verifier acting for EPD Hub Limited |

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

## PRODUCT

| | |
|---|---|
| Product name | Cu Wire |
| Additional labels | This is a Multiple Product EPD.<br>Worst-case product: Copper Wire 50 mm² (0.393 kg/m).<br>Other product labels covered: Copper Wire 25 mm² (0,214 kg/m).<br>Reason for variation: Variants differ only in cross-sectional area, which changes the copper mass per meter and GWP. No other composition or technical differences exist. |
| Product reference | 50 mm² (wors-case product): 30130001, 25 mm²: 30130000 |
| Place(s) of raw material origin | Sweden |
| Place of production | Alstermo, Sweden |
| Place(s) of installation and use | Norway |
| Period for data | 01.01.2024-31.12.2024 |
| Averaging in EPD | Multiple products |
| Variation in GWP-fossil for A1-A3 (%) | <50% (+0.00 / –44.7%) |
| A1-A3 Specific data (%) | 107 |

## ENVIRONMENTAL DATA SUMMARY

| | |
|---|---|
| **Declared unit** | 1 m |
| **Declared unit mass** | 0,393 kg |
| **GWP-fossil, A1-A3 ($kgCO_2e$)** | 7,60E-01 |
| **GWP-total, A1-A3 ($kgCO_2e$)** | 7,07E-01 |
| **Secondary material, inputs (%)** | 5,67 |
| **Secondary material, outputs (%)** | 58,8 |
| **Total energy use, A1-A3 (kWh)** | 6,46 |
| **Net freshwater use, A1-A3 ($m^3$)** | 0,61 |

# PRODUCT AND MANUFACTURER

## ABOUT THE MANUFACTURER

ELIT is a Norwegian competence center and total supplier offering sourcing and technical service solutions to the electrical, HVAC, plumbing, industrial, and infrastructure sectors. In addition to delivering high-quality components and systems, ELIT provides product customization, technical support, and professional training through its internal competence center.

ELIT offers a wide range of products tailored to meet the needs of different industries. For more information about ELIT AS and its full product selection, visit https://elit.no/.

## PRODUCT DESCRIPTION

Standard uninsulated copper earthing conductor for common grounding systems. Used as an earthing conductor for fixed installation in ground. Designed for grounding installations in building and infrastructure systems.

Technical characteristics:

•Material: copper

•Conductor standard: EN 60228, Class 2

•Installation type: Fixed installation in ground

For more information about ELIT AS and its product range, visit https://elit.no/.

## PRODUCT RAW MATERIAL MAIN COMPOSITION

| Raw material category | Amount, mass % | Material origin |
|---|---|---|
| Metals | 100 | EU |
| Minerals | - | - |
| Fossil materials | - | - |
| Bio-based materials | - | - |

## BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

| | |
|---|---|
| Biogenic carbon content in product, kg C | - |
| Biogenic carbon content in packaging, kg C | 0,24 |

## FUNCTIONAL UNIT AND SERVICE LIFE

| | |
|---|---|
| Declared unit | 1 m |
| Mass per declared unit | 0,393 kg |
| Functional unit | - |
| Reference service life | - |

## SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

# PRODUCT LIFE-CYCLE

## SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

| Product stage | | | Assembly stage | | Use stage | | | | | | | End of life stage | | | | Beyond the system boundaries | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D | | |
| x | x | x | x | MND | MND | MND | MND | MND | MND | MND | MND | x | x | x | x | | x | |
| Raw materials | Transport | Manufacturing | Transport | Assembly | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | Deconstruction/ demolition | Transport | Waste processing | Disposal | Reuse | Recovery | Recycling |

*Modules not declared = MND. Modules not relevant = MNR*

## MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory. The copper wires are sourced as finished products and delivered to ELIT's warehouse in Nannestad, Norway. Upstream manufacturing data (A1–A3) is based on the verified EPD from Amokabel for annealed copper wire, which comprehensively covers materials, production processes, and material losses. No primary data collection was required for these upstream processes, as the supplier’s EPD provides a complete dataset reflecting typical European production conditions.

ELIT receives the finished copper wires on cable drums directly from the manufacturer. The products are delivered to ELIT’s central warehouse in Nannestad, Norway, where they are stored, packed, and shipped to customers or wholesalers. Packaging for transport includes plastic film and wooden pallets and is fully accounted for in the inventory.

ELIT’s specific contributions to the manufacturing stage include additional energy consumption related to storage and packing at the warehouse (A3), which is calculated based on the company’s annual electricity usage and the total product volume handled. The electricity mix reflects the local Norwegian grid, including energy losses during transmission. Further contributions include transport to customers (A4) and any repackaging activities (A3).

End-of-life scenarios for both the product and packaging are calculated separately to reflect ELIT’s supply chain and waste management practices. The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

## TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Module A4 covers the transport of the product to the customer. Transport for A4 is calculated based on the average annual sales distance from head warehouse to customer. This transport distance is calculated to be 148,5km and the transportation method is lorry. The total weight includes the product and packaging per declared unit. Vehicle capacity utilization volume factor is assumed to be 100% which means full load. In reality, it may vary but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. To be conservative, empty returns are included in this study as implemented through an average load factor in the Ecoinvent transport datapoints. Transportation does not cause losses as product are packaged properly.
Module A5 includes the treatment of packaging waste (plastic and wood) according to EU end-of-life scenarios. Additionally, a 2% material loss of the copper wire is included to reflect typical losses during installation, such as cutting and fitting.

## PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

## PRODUCT END OF LIFE (C1-C4, D)

Demolition is assumed to consume 0,01 kWh/kg of product. The source of energy is diesel fuel used by construction machines (C1). It is assumed that 100% of the waste is collected and transported to the waste treatment centre. Transportation distance to treatment is assumed as 50km and the transportation method is assumed to be lorry (C2). Approximately 60% of copper is assumed to be recycled according to (EN 50693:2019) (C3). It is assumed that the remaining 40% of copper is taken to landfill for final disposal (C4). Benefits and loads in module D are calculated for the copper recycling activities at module C3 and for the exported energy from incineration of packaging materials in module A5.

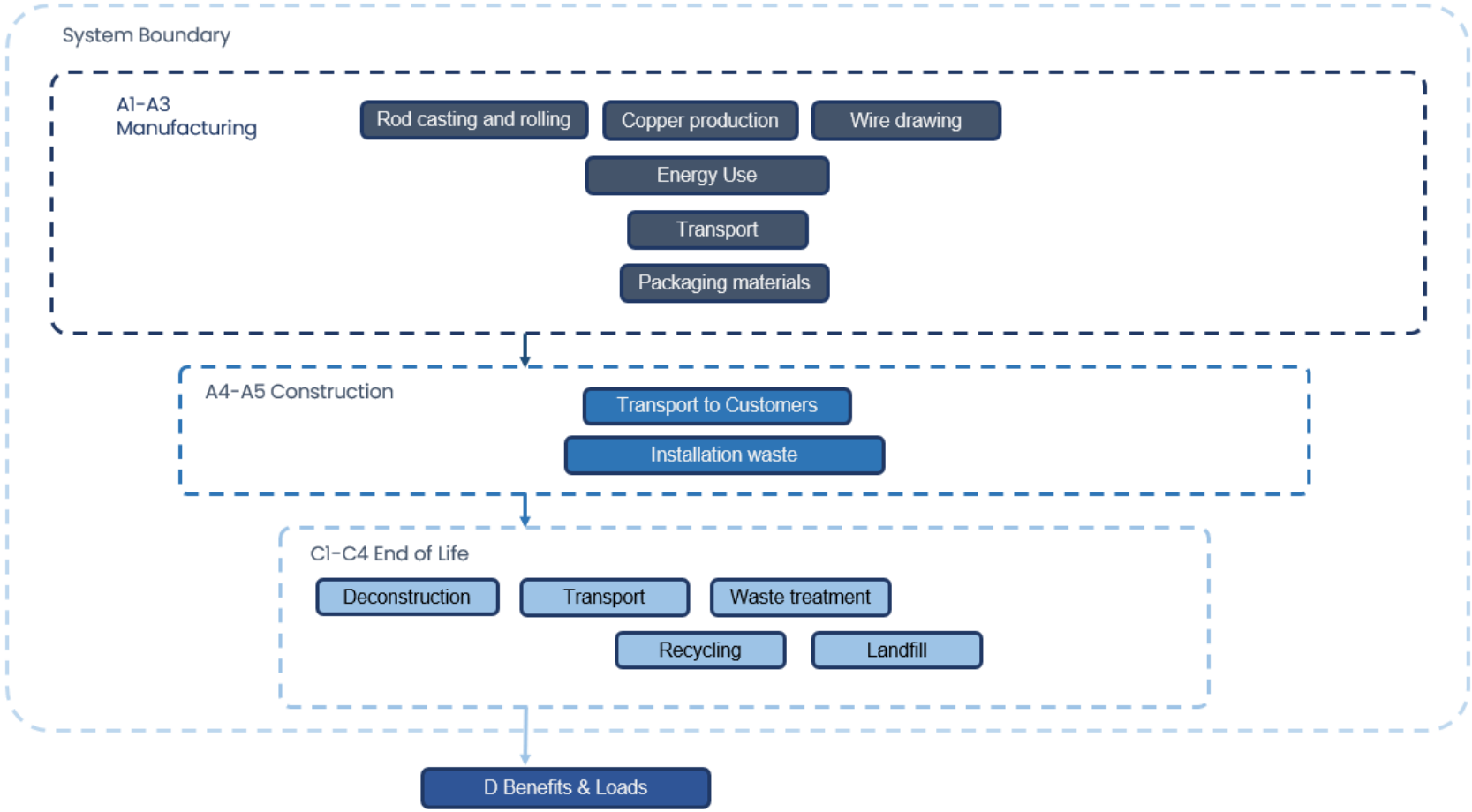


**Figure: Life Cycle Diagram-** *Overview of the life cycle stages included in the EPD, showing all relevant processes from raw material extraction to end-of-life, including potential benefits beyond the system boundary.*

# LIFE-CYCLE ASSESSMENT

## CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

## VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

## ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

| Data type | Allocation |
|---|---|
| Raw materials | No allocation |
| Packaging material | Allocated by mass or volume |
| Ancillary materials | Allocated by mass or volume |
| Manufacturing energy and waste | Allocated by mass or volume |

The copper wires are purchased as fully finished products, that we receive on cable drums. ELIT does not perform any additional manufacturing or processing steps beyond cutting customers desired lengths, packaging and distribution. No further modifications or alterations are made to the products before they are sold.

## PRODUCT & MANUFACTURING SITES GROUPING

| | |
|---|---|
| Type of grouping | Multiple products |
| Grouping method | Based on worst-case results |
| Variation in GWP-fossil for A1-A3, % | <50% (+0.00 / –44.7%) |

This is a multiple product EPD, as it covers the same product type (copper wire) in two cross-sections: 25 mm² and 50 mm². No averaging calculation has been performed; instead, the results are declared for the worst-case product, which is the 50 mm² wire. A scaling table is included in the annex to show the calculated results for the 25 mm² wire.

## LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

# ENVIRONMENTAL IMPACT DATA

*The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.*

## CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWP – total[1)] | kg $CO_2e$ | 6,95E-01 | 4,85E-02 | -3,66E-02 | 7,07E-01 | 1,14E-02 | 7,29E-02 | MND | MND | MND | MND | MND | MND | MND | 1,42E-03 | 1,31E-02 | 6,42E-03 | 9,82E-04 | -1,21E+00 |
| GWP – fossil | kg $CO_2e$ | 6,93E-01 | 4,85E-02 | 1,89E-02 | 7,60E-01 | 1,14E-02 | 1,72E-02 | MND | MND | MND | MND | MND | MND | MND | 1,42E-03 | 1,30E-02 | 6,41E-03 | 9,81E-04 | -1,21E+00 |
| GWP – biogenic | kg $CO_2e$ | 0,00E+00 | 0,00E+00 | -5,56E-02 | -5,56E-02 | 0,00E+00 | 5,56E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,12E-03 |
| GWP – LULUC | kg $CO_2e$ | 2,74E-03 | 1,71E-05 | 9,77E-05 | 2,86E-03 | 4,08E-06 | 5,90E-05 | MND | MND | MND | MND | MND | MND | MND | 1,45E-07 | 5,78E-06 | 7,54E-06 | 5,61E-07 | -1,90E-03 |
| Ozone depletion pot. | kg $CFC\text{-}_{11}e$ | 8,22E-08 | 9,65E-10 | 5,00E-10 | 8,36E-08 | 2,26E-10 | 1,70E-09 | MND | MND | MND | MND | MND | MND | MND | 2,17E-11 | 1,82E-10 | 6,89E-11 | 2,84E-11 | -1,12E-08 |
| Acidification potential | mol $H^+e$ | 2,20E-02 | 1,52E-04 | 9,34E-05 | 2,23E-02 | 2,36E-05 | 4,53E-04 | MND | MND | MND | MND | MND | MND | MND | 1,28E-05 | 4,35E-05 | 6,86E-05 | 6,96E-06 | -3,59E-02 |
| EP-freshwater[2)] | kg Pe | 6,03E-04 | 3,21E-06 | 6,37E-06 | 6,12E-04 | 7,65E-07 | 2,64E-04 | MND | MND | MND | MND | MND | MND | MND | 4,09E-08 | 1,01E-06 | 3,47E-06 | 8,07E-08 | -2,60E-02 |
| EP-marine | kg Ne | 6,17E-03 | 5,11E-05 | 2,25E-05 | 6,25E-03 | 5,68E-06 | 1,32E-04 | MND | MND | MND | MND | MND | MND | MND | 5,93E-06 | 1,41E-05 | 1,52E-05 | 2,65E-06 | -1,04E-02 |
| EP-terrestrial | mol Ne | 9,69E-02 | 5,55E-04 | 2,50E-04 | 9,77E-02 | 6,13E-05 | 1,98E-03 | MND | MND | MND | MND | MND | MND | MND | 6,49E-05 | 1,53E-04 | 1,72E-04 | 2,90E-05 | -1,53E-01 |
| POCP ("smog")[3)] | kg NMVOCe | 1,84E-02 | 2,38E-04 | 1,00E-04 | 1,88E-02 | 3,93E-05 | 3,86E-04 | MND | MND | MND | MND | MND | MND | MND | 1,94E-05 | 6,06E-05 | 5,06E-05 | 1,04E-05 | -2,96E-02 |
| ADP-minerals & metals[4)] | kg Sbe | 1,63E-03 | 1,59E-07 | 3,27E-07 | 1,63E-03 | 3,78E-08 | 3,25E-05 | MND | MND | MND | MND | MND | MND | MND | 5,08E-10 | 4,29E-08 | 3,78E-07 | 1,56E-09 | -4,79E-04 |
| ADP-fossil resources | MJ | 1,29E+01 | 6,81E-01 | 2,85E-01 | 1,38E+01 | 1,60E-01 | 3,01E-01 | MND | MND | MND | MND | MND | MND | MND | 1,85E-02 | 1,83E-01 | 7,56E-02 | 2,41E-02 | -1,39E+01 |
| Water use[5)] | $m^3e$ depr. | 1,95E+02 | 3,34E-03 | 6,59E-01 | 1,96E+02 | 7,94E-04 | 3,92E+00 | MND | MND | MND | MND | MND | MND | MND | 4,63E-05 | 8,49E-04 | 1,20E-03 | 6,95E-05 | -4,92E-01 |

*1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.*

## ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Particulate matter | Incidence | 3,52E-09 | 3,81E-09 | 1,45E-09 | 8,78E-09 | 8,37E-10 | 3,12E-10 | MND | MND | MND | MND | MND | MND | MND | 3,63E-10 | 1,04E-09 | 9,57E-10 | 1,58E-10 | -2,92E-07 |
| Ionizing radiation[6)] | kBq U235e | 6,71E-02 | 8,68E-04 | 5,52E-03 | 7,35E-02 | 2,06E-04 | 1,52E-03 | MND | MND | MND | MND | MND | MND | MND | 8,21E-06 | 1,48E-04 | 2,72E-04 | 1,51E-05 | -8,94E-02 |
| Ecotoxicity (freshwater) | CTUe | 1,36E+00 | 8,94E-02 | 1,44E-01 | 1,59E+00 | 2,13E-02 | 3,78E-02 | MND | MND | MND | MND | MND | MND | MND | 1,02E-03 | 2,90E-02 | 4,39E-02 | 2,02E-03 | -3,11E+02 |
| Human toxicity, cancer | CTUh | 4,59E-11 | 8,26E-12 | 6,25E-11 | 1,17E-10 | 1,91E-12 | 6,86E-12 | MND | MND | MND | MND | MND | MND | MND | 1,46E-13 | 2,22E-12 | 5,13E-12 | 1,81E-13 | -6,75E-10 |
| Human tox. non-cancer | CTUh | 1,13E-09 | 4,28E-10 | 3,66E-10 | 1,93E-09 | 1,01E-10 | 7,57E-11 | MND | MND | MND | MND | MND | MND | MND | 2,31E-12 | 1,15E-10 | 3,28E-10 | 4,16E-12 | -3,84E-08 |
| SQP[7)] | - | 1,08E+00 | 4,05E-01 | 4,48E+00 | 5,97E+00 | 9,66E-02 | 1,38E-01 | MND | MND | MND | MND | MND | MND | MND | 1,30E-03 | 1,09E-01 | 1,43E-01 | 4,74E-02 | -2,73E+01 |

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

## USE OF NATURAL RESOURCES

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Renew. PER as energy[8)] | MJ | 6,54E+00 | 1,18E-02 | 2,49E+00 | 9,04E+00 | 2,80E-03 | -3,14E-01 | MND | MND | MND | MND | MND | MND | MND | 1,17E-04 | 2,51E-03 | 1,18E-02 | 2,32E-04 | -6,81E+00 |
| Renew. PER as material | MJ | 0,00E+00 | 0,00E+00 | 4,87E-01 | 4,87E-01 | 0,00E+00 | -4,87E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 9,03E-03 |
| Total use of renew. PER | MJ | 6,54E+00 | 1,18E-02 | 2,97E+00 | 9,53E+00 | 2,80E-03 | -8,01E-01 | MND | MND | MND | MND | MND | MND | MND | 1,17E-04 | 2,51E-03 | 1,18E-02 | 2,32E-04 | -6,80E+00 |
| Non-re. PER as energy | MJ | 1,32E+01 | 6,81E-01 | 2,45E-01 | 1,42E+01 | 1,60E-01 | 3,00E-01 | MND | MND | MND | MND | MND | MND | MND | 1,85E-02 | 1,83E-01 | 7,56E-02 | 2,41E-02 | -1,39E+01 |
| Non-re. PER as material | MJ | 0,00E+00 | 0,00E+00 | 4,06E-02 | 4,06E-02 | 0,00E+00 | -4,06E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 6,10E-03 |
| Total use of non-re. PER | MJ | 1,32E+01 | 6,81E-01 | 2,85E-01 | 1,42E+01 | 1,60E-01 | 2,60E-01 | MND | MND | MND | MND | MND | MND | MND | 1,85E-02 | 1,83E-01 | 7,56E-02 | 2,41E-02 | -1,39E+01 |
| Secondary materials | kg | 2,23E-02 | 3,12E-04 | 2,01E-03 | 2,46E-02 | 7,42E-05 | 1,08E-02 | MND | MND | MND | MND | MND | MND | MND | 7,70E-06 | 8,23E-05 | 8,76E-05 | 6,05E-06 | 1,43E-01 |
| Renew. secondary fuels | MJ | 3,76E-03 | 3,94E-06 | 1,64E-02 | 2,02E-02 | 9,38E-07 | 4,04E-04 | MND | MND | MND | MND | MND | MND | MND | 2,01E-08 | 1,05E-06 | 3,98E-06 | 1,25E-07 | -7,42E-04 |
| Non-ren. secondary fuels | MJ | 1,26E-02 | 0,00E+00 | 0,00E+00 | 1,26E-02 | 0,00E+00 | 2,52E-04 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Use of net fresh water | $m^3$ | 5,99E-01 | 9,17E-05 | 1,54E-02 | 6,15E-01 | 2,18E-05 | 1,23E-02 | MND | MND | MND | MND | MND | MND | MND | 1,23E-06 | 2,43E-05 | 3,30E-05 | 2,50E-05 | -2,06E-02 |

*8) PER = Primary energy resources.*

## END OF LIFE – WASTE

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hazardous waste | kg | 2,50E-04 | 9,77E-04 | 1,60E-03 | 2,83E-03 | 2,32E-04 | 1,78E-04 | MND | MND | MND | MND | MND | MND | MND | 2,06E-05 | 3,19E-04 | 5,90E-04 | 2,66E-05 | -2,56E-01 |
| Non-hazardous waste | kg | 5,81E-02 | 2,06E-02 | 4,35E-02 | 1,22E-01 | 4,90E-03 | 7,78E-02 | MND | MND | MND | MND | MND | MND | MND | 2,81E-04 | 5,98E-03 | 1,66E-02 | 6,08E-04 | 3,04E-01 |
| Radioactive waste | kg | 3,09E-05 | 2,16E-07 | 1,24E-06 | 3,24E-05 | 5,12E-08 | 6,92E-07 | MND | MND | MND | MND | MND | MND | MND | 2,01E-09 | 3,63E-08 | 6,68E-08 | 3,69E-09 | -2,20E-05 |

## END OF LIFE – OUTPUT FLOWS

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Components for re-use | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Materials for recycling | kg | 4,00E-02 | 0,00E+00 | 0,00E+00 | 4,00E-02 | 0,00E+00 | 1,17E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 2,36E-01 | 0,00E+00 | 0,00E+00 |
| Materials for energy rec | kg | 9,92E-04 | 0,00E+00 | 0,00E+00 | 9,92E-04 | 0,00E+00 | 1,98E-05 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy | MJ | 1,35E-03 | 0,00E+00 | 0,00E+00 | 1,35E-03 | 0,00E+00 | 5,48E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy – Electricity | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 2,31E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy – | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 3,17E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

## ADDITIONAL INDICATOR – GWP-GHG

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWP-GHG[9)] | kg $CO_2e$ | 6,95E-01 | 4,85E-02 | 1,90E-02 | 7,63E-01 | 1,14E-02 | 1,73E-02 | MND | MND | MND | MND | MND | MND | MND | 1,42E-03 | 1,31E-02 | 6,42E-03 | 9,82E-04 | -1,21E+00 |

*9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.*

# THIRD-PARTY VERIFICATION STATEMENT

## VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

## THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited
01.08.2025

# ANNEX I: SCALING TABLE

**Table 1. Scaling Table for Environmental Impact of Cu Wire**

*This table presents the Global Warming Potential (GWP) values for ELIT's copper wire products with different cross-sections (e.g. 25 mm² and 50 mm²). The values are scaled based on product mass, using the worst-case (50 mm²) as the basis. Results are reported for total GWP, fossil GWP, and biogenic GWP in accordance with EN 15804+A1 and A2.*

| Product Name | Mass (in kg) | A1-A3, EN 15804+A1 | A1-A3, EN 15804+A2 | | |
|---|---|---|---|---|---|
| | | GWP | $GWP_{-total}$ | $GWP_{-fossil}$ | $GWP_{-biogenic}$ |
| Copper wire (50mm2) | 0,393 kg | 0,07 | 0,71 | 0,76 | 0,06 |
| Copper wire (25mm2) | 0,214 kg | 0,05 | 0,37 | 0,42 | 0,05 |