# Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Welding Filler Metals: Aristo-coated unannealed MAG wire from Vamberk

from

## ESAB

EPD of multiple products, based on the average results of the product group. See list of products on page 3.

| | |
|---|---|
| Programme: | The International EPD System, www.environdec.com |
| Programme operator: | EPD International AB |
| Type of EPD: | EPD of multiple products from a company |
| EPD registration number: | EPD-IES-0027274 |
| Version date: | 2025-12-15 |
| Validity date: | 2030-12-14 |
| | *An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com* |

# GENERAL INFORMATION

| Programme Information | |
|---|---|
| **Programme:** | The International EPD® System |
| **Address:** | EPD International AB<br>Box 210 60<br>SE-100 31 Stockholm<br>Sweden |
| **Website:** | www.environdec.com |
| **E-mail:** | support@environdec.com |

| Product Category Rules (PCR) |
|---|
| **CEN standard EN 15804 serves as the Core Product Category Rules (PCR)** |
| **Product Category Rules (PCR):** ***Construction Products, PCR 2019:14, Version 2.01***<br>***UN CPC 41267*** |
| **PCR review was conducted by:** ***The Technical Committee of the International EPD® System. Review chair: Rob Rouwette (chair), Noa Meron (co-chair) Contact: EPD International (environdec.com)*** |

| Third-party Verification |
|---|
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br>☒ **EPD process certification* without a pre-verified LCA/EPD tool**<br><br>Third-party verifier: *Bureau Veritas Sweden, Fabriksgatan 13, 412 50 Göteborg.*<br><br>Accredited by: *SWEDAC, accreditation number 1236*.<br><br>*EPD process certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.envrondec.com. |
| Procedure for follow-up of data during EPD validity involves third party verifier:<br><br>☒ Yes ☐ No |

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.
For further information about comparability, see EN 15804 and ISO 14025.

# INFORMATION ABOUT EPD OWNER

Owner of the EPD: ESAB

Address: ESAB AB, Box 8004, 402 77 Göteborg, Sweden

Contact: Phone: +46 31 50 90 00, E-mail: epd@esab.com.

Description of the organisation: ESAB is a world leader in welding and cutting equipment and consumables. We offer a complete line of fabrication solutions for virtually every application.

Product-related or management system-related certifications: ISO 9001, 14001, 45001 in all ESAB sites globally including the manufacturing site in Vamberk.

# PRODUCT INFORMATION

Product name: The product group consists of OK AristoRod 12.50, OK AristoRod 12.57, OK AristoRod 12.63, OK AristoRod 38 Zn, Purus 42 CF and Purus 46 CF.

Product identification: Item numbers starting with 1A50, 1A57, 1A63, 1A73, 1A10 or 1A12 are all products in this group.

UN CPC code: 41267

Product description: Aristo-coated, unannealed, silicon-manganese alloyed solid wires for GMAW (gas metal arc welding) of all general structural and engineering unalloyed and low-alloyed carbon manganese steels. They are delivered on spools or in ESAB Marathon Pac and are mainly used in mechanized welding applications. Applications include automobile frame fabrication, shipbuilding hulls, general fabrication, and truck trailers.

The Reference Service Life for a welded joint depends on a number of factors, including welding method used, quality of welding and joint design, exact alloy composition, the environment in which it is installed (corrosiveness, temperatures, UV-exposure etc), as well as whether the joint is part of a bearing structure exposed to vibrations, movements or dynamic loads. If all factors are optimal, the life span is usually around 40 years. Regular inspections and maintenance prolong the lifetime.

Unused welding filler metals, stored under right conditions, can have a shelf life of two years and longer.

Name and location of production site: ESAB CZ S.R.O., Smetanovo nábř. 334, 517 54 Vamberk, Czech Republic.

# CONTENT DECLARATION

The content declaration is based on the average contents of the six product groups included in this EPD.

| Product content | Mass, kg | Post-consumer recycled material, mass-% of product | Biogenic material | |
|---|---|---|---|---|
| | | | Mass-% of product | kg C/declared unit |
| Steel | 1,0E+00 | 4.0% | 0 | 0 |
| TOTAL | 1,0E+00 | 0 | 0 | 0 |

The products do not contain any declarable quantities of substances listed on the Candidate List of Substances of Very High Concern for Authorisation (REACH, EC No. 1907:2006). During the welding process, potentially hazardous fumes can arise. See section Additional Environmental Information for further information.

| Packaging materials | Mass, kg | Mass-% of product | Biogenic material | |
|---|---|---|---|---|
| | | | Mass-% of product | kg C/ declared unit |
| Metal | 5,3E-03 | 0,5% | 0,0% | 0,0E+00 |
| Plastic | 2,7E-03 | 0,3% | 0,0% | 0,0E+00 |
| Paper | 6,3E-05 | 0,0% | 100,0% | 2,5E-05 |
| Cardboard | 1,3E-02 | 1,3% | 100,0% | 5,8E-03 |
| Wood | 1,3E-03 | 0,1% | 99,0% | 6,1E-04 |
| TOTAL | 2,3E-02 | 2,3% | 62,4% | 6,4E-03 |

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of $CO_2$.

# LCA INFORMATION

Declared unit: 1 kg of Aristo-coated MAG wire.

Reference service life: There is no specific maximum time limit before which filler materials should be used. If stored under ideal storage conditions the time limit is extended, and filler materials can be used many years after the date of supply. The reverse is also true i.e. tough and severe storage conditions shorten the durability of the products. See Storage and Handling Recommendations for Filler Metals. The life span of a welded joint depends on several factors.

Time representativeness: Data has been collected for the full production year of 2024.

Geographical scope: Our own process is in the Vamberk manufacturing site in Czech Republic and most of the suppliers are based in Europe. The product group is supplied to customers globally.

Database(s) and LCA software used: EcoInvent 3.10 and SimaPro 9.6

Description of system boundaries:

EPD type d) Cradle to gate, A1–A3. The life cycle inventory includes:

- Upstream production of raw material steel, electricity, chemical products, packaging materials/parts,
- Inbound transport on road,
- Internal transports,
- Transport of finished goods from our manufacturing site to our warehouses,
- Energy and heat consumption, water consumption, emissions to water and generation of waste on site, and
- Downstream handling of production and packaging waste.

The production and maintenance of capital goods, infrastructure, tooling, and facilities have not been included, either in upstream processes or own processes, except for electricity production which includes infrastructure due to high importance in said datasets. Business travel has also been excluded. Supplier packaging has also been excluded due to limited use of packaging in the upstream as well as limited primary or secondary data.

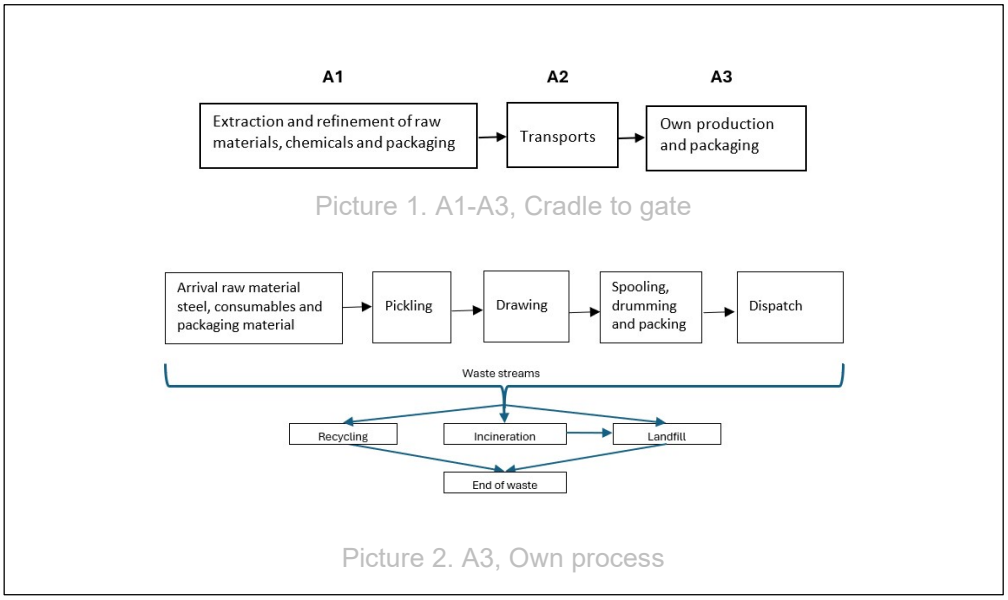
The upstream production of steel wire has been modelled using supplier EPDs and generic data to represent production at suppliers without available EPDs. For suppliers without EPDs, European market averages have been used as a basis together with communicated shares of average recycled content from suppliers.

In the end-of-life, the product cannot be separated from the bearer material it has been welded onto, is no longer identifiable and does not contain biogenic carbon. This means that the scope of the study, A1-A3, has been chosen in accordance with Section 2.2.2 in PCR 2019:14.

The period for which inputs to and outputs from the product system is accounted for is 100 years from the year that the LCA model represents. Forestry is included in the study as part of the techno sphere. Biogenic carbon in packaging materials has been balanced out with a packaging End-of-life treatment in A3.

Cut-off criteria:
When there have been uncertainties or missing data, conservative assumptions have been made. Cut-offs are never more than 1% of total environmental impacts, and all cut-offs together do not exceed 5%. In this LCA, no cut-offs have been made when collecting primary data.

Process flow diagram:




Picture 1. A1-A3, Cradle to gate




Picture 2. A3, Own process

Data quality:
Collection of data has been carried out in an iterative process in close collaboration with EHS professionals at the manufacturing site. Much of the data stems from records in the management system for ISO 14001 or 50001. Where primary data was not available, secondary data from EcoInvent has been used. All available data have been included in the LCA Report.

As A1 stands for a major part of $CO_2$-equivalents, the quality of data for raw material steel production has much bearing on results. Representative secondary data for raw material production is from EcoInvent and is deemed to be representative of geographical, time and technological prerequisites. The dataset is for reference year 2024. All processes have been deemed to fulfil the requirements as “Very good” or “Good” for the geographical, time and technological prerequisites, except for the modelled steel materials without EPDs that that was categories as “Fair” in its time representativeness. For the technological and geographical levels, it was categorized as “Good”.

Share of primary data in the LCA is 79%, which a majority can be attributed to used supplier EPDs (>65%) and to a lesser degree electricity, heating and transport processes. Inbound transport was calculated based on collected data on transport distances and weights for all ingoing materials to factory which was combined with representative secondary data. This means that inbound transport is a mixture of primary and secondary data which in total contributed 1,5% to the GWP-GHG impact. Proxy data has been used to reflect the use of energy needed to run warehouses. Proxy data has also been used to represent some chemical products in A3, for which we could not find representative secondary data, as well as representing impact from storage of finished products at warehouses which has been based on gathered market statistics. The proxy data amounts to 1,5% of total impact. In total the share of primary data reflects 79%, secondary data 20.5% and proxy data 1,5% to the GWP-GHG impact.

| Process | Source type | Source | Reference year | Data category | Share of primary data, of GWP-GHG results for A1-A3 |
|---|---|---|---|---|---|
| Manufacturing of product | Collected data | EPD owner | 2024 | Primary data and representative secondary data | 1% |
| Raw material metal wire, Supplier A | Database | EcoInvent v3.10 | 2023 | Representative Secondary data | 0% |
| Raw material metal wire, Supplier B | Collected data | Supplier EPD (Confidential) with >95% primary data | 2021 | Primary data | 26% |
| Raw material metal wire, Supplier C | Collected data | Supplier EPD (Confidential) with >95% primary data | 2022 | Primary data | 43% |
| Transport processes | Collected data and database | EPD Ownder & EcoInvent v3.10 | 2021-2024 | Primary data and Representative secondary data | 1% |
| Other processes | Collected data and database | EcoInvent v3.10 | 2023 | Representative secondary data | 0% |
| **Total share of primary data, of GWP-GHG results for A1-A3** | | | | | **79%** |

Electricity mix:
The dataset used for residual electricity mix in Czech Republic is from EcoInvent, and is based on figures from AIB, Association of Issuing Bodies. The GWP(GHG)-factor for this electricity mix is 0.76 kg CO2-equivalents per kWh.

Allocation procedures:
Allocations for our own processes (A3) have been made based on mass of produced products. The share of environmental impact has been distributed evenly between the product groups as the internal process is the same for all of them.

Allocation has been applied to relevant upstream raw materials datasets to reflect supplier-specific information. Where supplier EPDs were available, these have been used directly to model the raw material flows. For suppliers without EPDs, datasets have been modified using allocation based on communicated shares of recycled content. These models are built using representative secondary data from the European market, adjusted with primary data from suppliers regarding recycled material content.

In line with the cut-off approach, recycled material flows have been modeled as burden-free, based on supplier-provided statistics. For the rest of composition which reflects zero recycled material, the material has been allocated the same burden as a primary (virgin) material and thus carry the full burden according to the conservative approach that is recommended in section 4.5.1 in PCR 2019:14.

Explanation of product group:
The main differences between the products included is the composition of alloys and dimensions of the wire. The LCA has been carried out using the average results since variations in environmental performance is lower than 10% between the best- and worst-case results for all indicators.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

| | Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw material supply | Transport | Manufacturing | Transport | Construction installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| **Module** | **A1** | **A2** | **A3** | **A4** | **A5** | **B1** | **B2** | **B3** | **B4** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Modules declared | X | X | X | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Geography | GLO | EU | CZ | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Primary data used | 79% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | 1% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

# ENVIRONMENTAL PERFORMANCE

## LCA results - main environmental performance results

### Mandatory impact category indicators according to EN 15804

| Results per functional or declared unit | | |
|---|---|---|
| **Indicator** | **Unit** | **A1-A3** |
| GWP-fossil | kg $CO_2$ eq. | 2.9E+00 |
| GWP-biogenic | kg $CO_2$ eq. | 4.4E-02 |
| GWP-luluc | kg $CO_2$ eq. | 1.2E-03 |
| GWP-total | kg $CO_2$ eq. | 3.0E+00 |
| ODP | kg CFC 11 eq. | 2.2E-08 |
| AP | mol $H^+$ eq. | 1.2E-02 |
| EP-freshwater | kg P eq. | 5.4E-04 |
| EP-marine | kg N eq. | 2.6E-03 |
| EP-terrestrial | mol N eq. | 2.6E-02 |
| POCP | kg NMVOC eq. | 9.5E-03 |
| ADP-minerals&metals* | kg Sb eq. | 7.8E-06 |
| ADP-fossil* | MJ | 3.9E+01 |
| WDP* | $m^3$ | 3.6E-01 |
| Acronyms | 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 | |

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator. The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available secondary datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes. Capital goods and infrastructure has only been included in generic datasets for electricity production.*

## Additional mandatory and voluntary impact category indicators

| Results per functional or declared unit | | |
|---|---|---|
| **Indicator** | **Unit** | **A1-A3** |
| GWP-GHG[1] | kg $CO_2$ eq. | 3.0E+00 |
| *Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017* | | |

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

## Resource use indicators

| Results per functional or declared unit | | |
|---|---|---|
| **Indicator** | **Unit** | **A1-A3** |
| PERE | MJ | 1.6E+00 |
| PERM | MJ | 2.2E-01 |
| PERT | MJ | 1.8E+00 |
| PENRE | MJ | 4.0E+01 |
| PENRM | MJ | 1.6E-01 |
| PENRT | MJ | 4.0E+01 |
| SM | kg | 1.7E-01 |
| RSF | MJ | 6.9E-09 |
| NRSF | MJ | 0.0E+00 |
| FW | $m^3$ | 1.9E+00 |
| Acronyms | 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | |

## Waste indicators

| Results per functional or declared unit | | |
|---|---|---|
| **Indicator** | **Unit** | **A1-A3** |
| Hazardous waste disposed | kg | 1.1E-05 |
| Non-hazardous waste disposed | kg | 2.1E-03 |
| Radioactive waste disposed | kg | 1.8E-05 |

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic $CO_2$ is set to zero.

## Output flow indicators

| Results per functional or declared unit | | |
|---|---|---|
| **Indicator** | **Unit** | **A1-A3** |
| Components for re-use | kg | 0.0E+00 |
| Material for recycling | kg | 2.0E-02 |
| Materials for energy recovery | kg | 0.0E+00 |
| Exported energy, electricity | MJ | 0.0E+00 |
| Exported energy, thermal | MJ | 0.0E+00 |

# ADDITIONAL ENVIRONMENTAL INFORMATION

The welded product is recyclable together with the material it has been welded on to, given that the bearer material is possible to separate from other, non-metal materials, and that there is infrastructure for recycling available where and when it becomes waste. By choosing material recycling at the end-of-life of the welded construction, the end user can contribute to energy savings in the life cycle and re-use of the metals and alloys in the product.

Welding activities give emissions of potentially hazardous fumes. After welding has been finished, there are no emissions from the welded goods (when situated in building). ESAB is committed to reducing hazardous fumes from welding activities and have instructions for proper use of the product to reduce indoor emissions, as well as a range of Personal Protective Equipment products. More information can be found at esab.com.

We have a triple umbrella certificate for ISO 9001, 14001 and 45001 for all our sites globally. More information about our Sustainability work can be found here: Sustainability | Our Approach | ESAB Corporation. For questions about this EPD, please contact us at epd@esab.com.

# ABBREVIATIONS

| Abbreviation | Definition |
|---|---|
| **General Abbreviations** | |
| EN | European Norm (Standard) |
| EPD | Environmental Product Declaration |
| EF | Environmental Footprint |
| GPI | General Programme Instructions |
| ISO | International Organization for Standardization |
| LCA | Life Cycle Assessment |
| PCR | Product Category Rules |
| c-PCR | Complementary Product Category Rules |
| CEN | European Committee for Standardization |
| CLC | Co-location centre |
| CPC | Central product classification |
| GHS | Globally harmonized system of classification and labelling of chemicals |
| GRI | Global Reporting Initiative |
| **Environmental Impact Indicators (EN 15804)** | |
| GHG | Greenhouse gas |
| GWP | Global Warming Potential (kg $CO_2$ eq.) |
| GWP-fossil | Global Warming Potential from fossil sources (kg $CO_2$ eq.) |
| GWP-biogenic | Global Warming Potential from biogenic sources (kg $CO_2$ eq.) |
| GWP-luluc | Global Warming Potential from land use and land use change (kg $CO_2$ eq.) |
| GWP-total | Total Global Warming Potential (kg $CO_2$ eq.) |
| GWP-GHG | Global Warming Potential for greenhouse gases (kg $CO_2$ eq.) |
| ODP | Ozone Depletion Potential (kg CFC-11 eq.) |
| AP | Acidification Potential (mol $H^+$ eq.) |
| EP | Eutrophication Potential |
| EP-freshwater | Freshwater eutrophication potential (kg P eq.) |
| EP-marine | Marine eutrophication potential (kg N eq.) |
| EP-terrestrial | Terrestrial eutrophication potential (mol N eq.) |
| POCP | Photochemical Ozone Creation Potential (kg NMVOC eq.) |
| ADP | Abiotic Depletion Potential |
| ADP-minerals&metals | Abiotic depletion potential for non-fossil resources (kg Sb eq.) |
| ADP-fossil | Abiotic depletion potential for fossil resources (MJ) |
| WDP | Water Deprivation Potential ($m^3$) |
| **Resource Use Indicators** | |
| PERE | Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ) |
| PERM | Use of renewable primary energy resources used as raw materials (MJ) |
| PERT | Total use of renewable primary energy resources (MJ) |
| PENRE | Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ) |
| PENRM | Use of non-renewable primary energy resources used as raw materials (MJ) |
| PENRT | Total use of non-renewable primary energy resources (MJ) |
| SM | Use of secondary material (kg) |
| RSF | Use of renewable secondary fuels (MJ) |
| NRSF | Use of non-renewable secondary fuels (MJ) |
| FW | Use of net fresh water ($m^3$) |
| **Waste Indicators** | |
| HW | Hazardous Waste (disposed) (kg) |
| NHW | Non-Hazardous Waste (disposed) (kg) |
| RW | Radioactive Waste (disposed) (kg) |
| **Output Flow Indicators** | |
| CFR | Components for Reuse (kg) |

| | |
|---|---|
| MR | Material for Recycling (kg) |
| MER | Materials for Energy Recovery (kg) |
| EEE | Exported Energy, Electricity (MJ) |
| EET | Exported Energy, Thermal (MJ) |
| **Lifecycle Stages / Modules** | |
| A1 | Raw material supply |
| A2 | Transport of raw materials |
| A3 | Manufacturing |
| A4 | Transport to site |
| A5 | Construction/Installation |
| B1 | Use |
| B2 | Maintenance |
| B3 | Repair |
| B4 | Replacement |
| B5 | Refurbishment |
| B6 | Operational energy use |
| B7 | Operational water use |
| C1 | Deconstruction/Demolition |
| C2 | Transport to waste processing |
| C3 | Waste processing |
| C4 | Disposal |
| D | Reuse-Recovery-Recycling potential |
| **Other Relevant Terms** | |
| SVHC | Substances of Very High Concern |
| EC No. | European Community Number |
| CAS No. | Chemical Abstracts Service Number |
| MJ | Megajoule |
| kg | Kilogram |
| $m^3$ | Cubic Meter |
| NMVOC | Non-Methane Volatile Organic Compounds |
| Sb eq. | Antimony Equivalents |
| P eq. | Phosphorus Equivalents |
| N eq. | Nitrogen Equivalents |
| CFC-11 eq. | Chlorofluorocarbon-11 Equivalents |
| $CO_2$ eq. | Carbon Dioxide Equivalents |
| kg C | Kilograms of Carbon |
| kg $CO_2$ eq. | Kilograms of Carbon Dioxide Equivalent |
| ND | Not Declared |

# REFERENCES

a) General Programme Instructions of International EPD System. Version 5.0.1.
b) PCR 2019:14. Construction Products. Version 2.0.1.
c) ISO 14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures
d) EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
e) EN 14044:2006 + Am 1 + Am 2 Environmental Management – Life Cycle Assessments – Requirements and guidelines
f) Engineering Report: Life Cycle Assessment for Unannealed Aristo-coated MAG wire from Vamberk, 2025-12-12
g) https://ecoquery.ecoinvent.org
h) https://www.aib-net.org/facts/european-residual-mix
i) https://phyllis.nl

**The following standards apply to the product groups and calculations:**

ISO 14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures

EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

EN 14044:2006 + Am 1 + Am 2 Environmental Management – Life Cycle Assessments – Requirements and guidelines

ISO 14341:2020 Welding consumables – Rods, wires and deposits for gas shielded metal arc welding of non-alloy and fine-grain steels – Classification

ISO 14344 Welding consumables – Procurement of filler materials and fluxes

ISO 544 Welding consumables – Technical delivery conditions for filler materials and fluxes, Type of product, dimensions, tolerances and markings

EN 13479 Welding consumables – General product standard for filler metals and fluxes for fusion welding of metallic materials

# VERSION HISTORY

**Original Version of the EPD, 2025-12-15**

EPD
INTERNATIONAL EPD SYSTEM
www.environdec.com