# Environmental Product Declaration

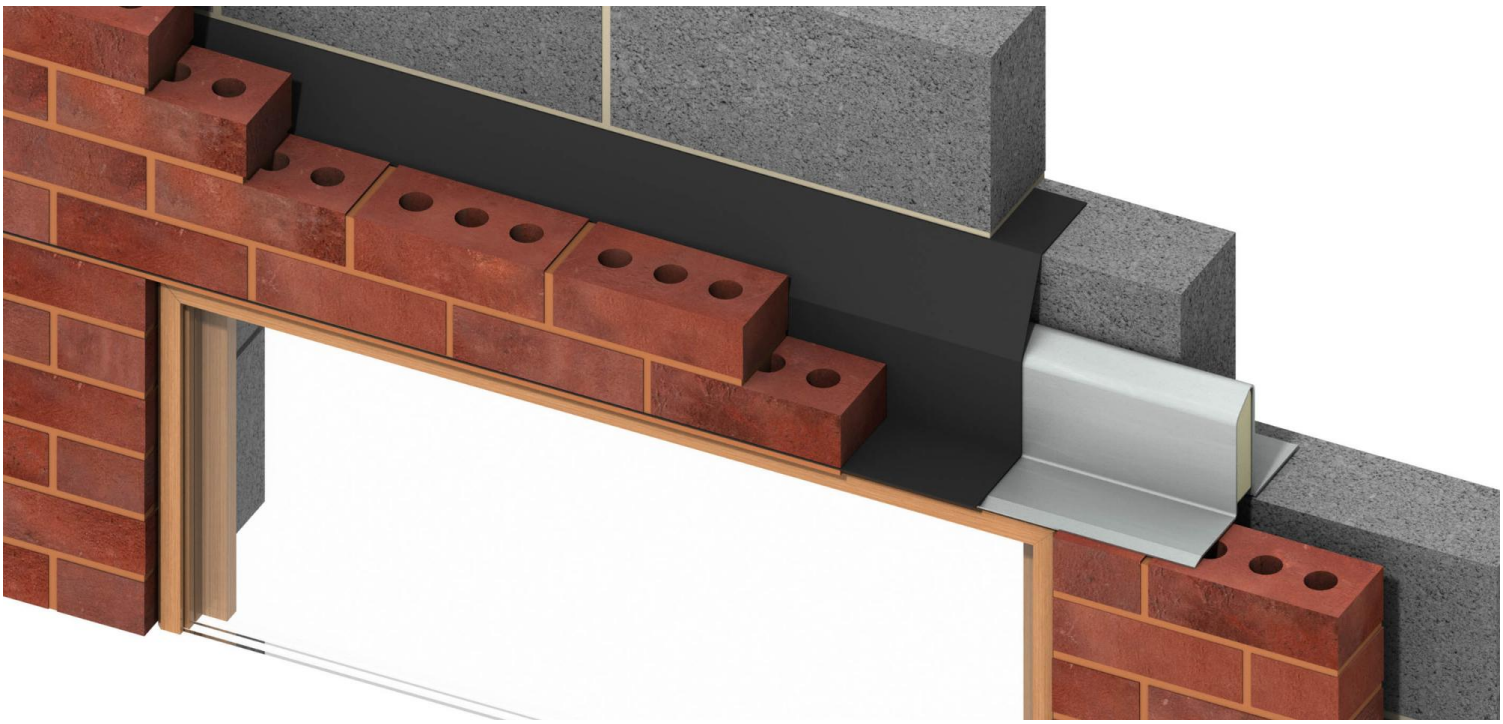
In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Cavity wall and box beam lintels (insulated with EPS)

from

**Leviat Ltd**

| | |
|---|---|
| Programme: | The International EPD System, www.environdec.com |
| Programme operator: | EPD International AB |
| Type of EPD: | EPD of multiple products, based on the average results of the product group. Products covered by this EPD: SH, SU, SUX, SW (insulated with EPS) |
| EPD registration number: | EPD-IES-0034480 |
| Version date: | 2026-10-20 |
| Validity date: | 2031-10-19 |
| | *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):** ***PCR 2019:14 Construction products. Version 2.0.1, 2025-06-05***<br><br>***UN CPC code(s):*** *42190 - Other structures (except prefabricated buildings) and parts of structures, of iron, steel or aluminium; plates, rods, angles, shapes, sections, profiles, tubes and the like, prepared for use in structures, of iron, steel or aluminium; props and similar equipment for scaffolding, shuttering or pitpropping* |
| **PCR review was conducted by:** The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com. Review chair: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/contact. |

| Third-party Verification |
|---|
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br>☒ **Individual EPD verification without a pre-verified LCA/EPD tool**<br>Third-party verifier: *Callum Hill, JCH Industrial Ecology Ltd*<br>Approved by: International EPD System |
| 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: Leviat Limited

Address: UK HQ: President Way | President Park | Sheffield | S4 7UR | United Kingdom

Contact: Andrea Warren, EPD.UK@leviat.com

Address and contact information of the LCA practitioner commissioned by the EPD owner:
Laura Cannatà, Eugenia Bertolino
Studio Fieschi & Soci – Tinexta Innovation Hub
Via Principi d'Acaja, 12 – 10138 Torino

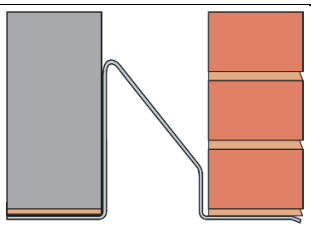
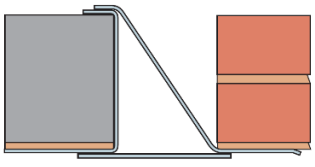
Description of the organisation:
Leviat is the global leader in lifting, connecting and anchoring technologies for the construction sector. We imagine, model and make engineered solutions and innovative products that enable safer, faster, stronger, more sustainable construction.
Home to trusted product brands such as Ancon, Halfen, Helifix, Isedio and Thermomass, Leviat has an extraordinary legacy of pioneering construction solutions. As an industry leader, driven by innovation and continuous improvement, Leviat is committed to achieving a more sustainable built environment, working closer with our customers & business partners.

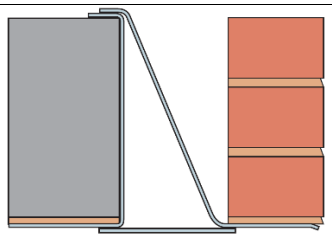
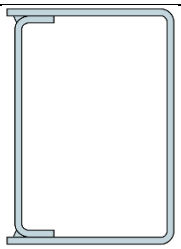
Product-related or management system-related certifications:
The company is ISO 9001, ISO 14001, ISO 45001 certified.

# PRODUCT INFORMATION

Product name: Cavity wall and box beam lintels (insulated with EPS)

Product identification: this EPD covers the EPS insulated products identified by the following codes: SH, SU, SUX, SW.

| | | |
|---|---|---|
| SH Light Duty Cavity Wall Lintel | SH cavity wall lintels are suitable for most domestic and commercial developments and framed structures. SH lintels require a separate dpc and are insulated with CFC-free, high density polystyrene. |  |
| SU Medium Duty Cavity Wall Lintel | SU cavity wall lintels are suitable for most domestic and commercial developments and framed structures. SU lintels act as a built-in DPC meaning any water penetrating into the cavity automatically transfers across the sloping face of the lintel and is disposed of externally. They are insulated with CFC-free, high density polystyrene. |  |

| | | |
|---|---|---|
| SUX Heavy Dity Cavity Wall Lintel | SUX cavity wall lintels are suitable for most domestic and commercial developments and framed structures. SUX lintels act as a built-in DPC meaning any water penetrating into the cavity automatically transfers across the sloping face of the lintel and is disposed of externally. They are insulated with CFC-free, high density polystyrene. |  |
| Box Beam Lintels (SW) | Box Lintels are suitable for use with solid or block walls.<br>Ancon box beam lintels are referenced SW _ _ _. |  |

| Leviat ref | Length range (mm) | | Lintel weight (kg/m) | EPS weight (kg/m) |
|---|---|---|---|---|
| | Min | Max | | |
| SW100 | 750 | 2700 | 7,79 | 0,112 |
| SW100 | 2701 | 3600 | 12,66 | 0,177 |
| SW100 | 3601 | 5400 | 15,19 | 0,177 |
| SW100X | 750 | 1500 | 7,79 | 0,112 |
| SW100X | 1501 | 2100 | 9,74 | 0,177 |
| SW100X | 2101 | 2700 | 12,66 | 0,177 |
| SW100X | 2701 | 3600 | 15,19 | 0,177 |
| SW100X | 3601 | 5400 | 18,69 | 0,243 |
| SW140 | 750 | 2700 | 9,00 | 0,116 |
| SW140 | 2701 | 3600 | 14,17 | 0,180 |
| SW140 | 3601 | 5400 | 17,00 | 0,180 |
| SW140X | 750 | 1500 | 9,00 | 0,116 |
| SW140X | 1501 | 2100 | 11,25 | 0,116 |
| SW140X | 2101 | 2700 | 14,17 | 0,180 |
| SW140X | 2701 | 3600 | 17,00 | 0,180 |
| SW140X | 3601 | 5400 | 21,21 | 0,246 |
| SW100E | 750 | 3900 | 13,65 | 0,111 |
| SW100XE | 750 | 5400 | 17,77 | 0,179 |
| SH50 | 750 | 1800 | 9,83 | 0,051 |
| SH50 | 1801 | 2100 | 10,46 | 0,063 |
| SH50 | 2101 | 2400 | 11,09 | 0,075 |
| SH50 | 2401 | 2700 | 11,71 | 0,087 |
| SH50 | 2701 | 3600 | 14,26 | 0,087 |
| SH50E | 750 | 1800 | 10,20 | 0,051 |
| SH50E | 1801 | 2400 | 11,45 | 0,075 |
| SH50E | 2401 | 3000 | 14,74 | 0,087 |
| SH70 | 750 | 1800 | 7,51 | 0,076 |
| SH70 | 1801 | 2100 | 8,13 | 0,094 |

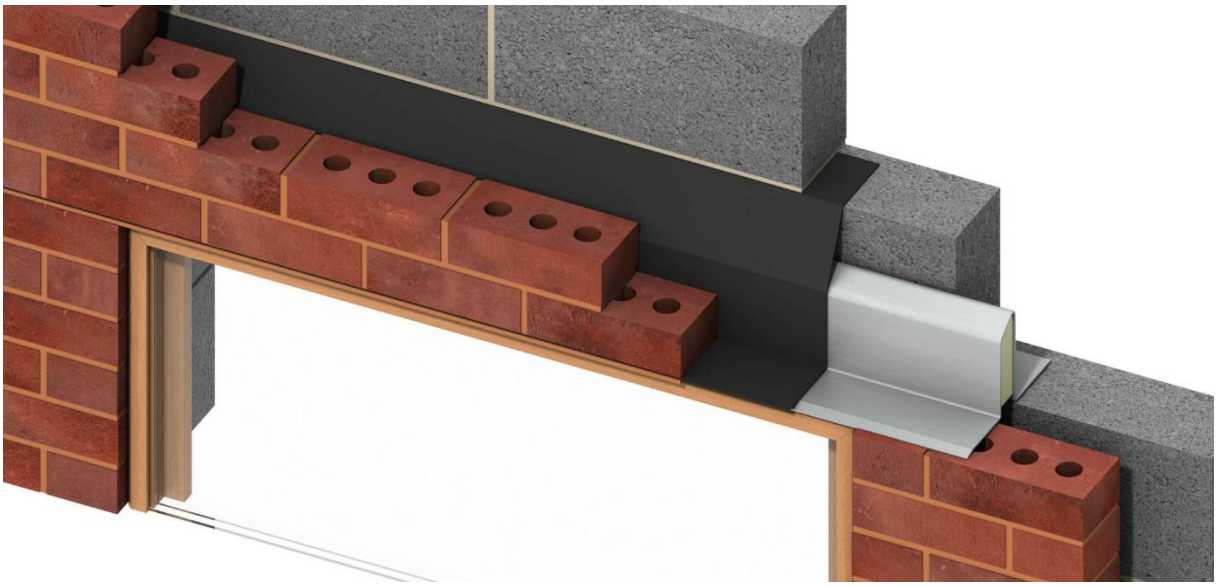
| Leviat ref | Length range (mm) | | Lintel weight (kg/m) | EPS weight (kg/m) |
|---|---|---|---|---|
| | Min | Max | | |
| SH70 | 2101 | 2400 | 8,74 | 0,111 |
| SH70 | 2401 | 2700 | 10,01 | 0,147 |
| SH70 | 2701 | 3600 | 12,51 | 0,147 |
| SH70E | 750 | 1800 | 7,98 | 0,077 |
| SH70E | 1801 | 2400 | 9,23 | 0,113 |
| SH70E | 2401 | 3000 | 13,13 | 0,149 |
| SH90 | 750 | 1800 | 7,70 | 0,101 |
| SH90 | 1801 | 2100 | 8,31 | 0,125 |
| SH90 | 2101 | 2400 | 8,94 | 0,149 |
| SH90 | 2401 | 2700 | 10,20 | 0,197 |
| SH90 | 2701 | 3600 | 13,02 | 0,203 |
| SH90E | 750 | 1800 | 8,15 | 0,102 |
| SH90E | 1801 | 2400 | 9,41 | 0,152 |
| SH90E | 2401 | 3000 | 13,35 | 0,200 |
| SH110 | 750 | 1500 | 8,00 | 0,128 |
| SH110 | 1501 | 2100 | 8,74 | 0,163 |
| SH110 | 2101 | 2400 | 10,53 | 0,250 |
| SH110 | 2401 | 3600 | 13,16 | 0,250 |
| SH110E | 750 | 1200 | 8,60 | 0,138 |
| SH110E | 1201 | 1800 | 9,70 | 0,190 |
| SH110E | 1801 | 3000 | 13,82 | 0,255 |
| SH130 | 750 | 1500 | 8,22 | 0,156 |
| SH130 | 1501 | 2100 | 8,94 | 0,192 |
| SH130 | 2101 | 2400 | 10,73 | 0,298 |
| SH130 | 2401 | 3600 | 13,41 | 0,298 |
| SH130E | 750 | 1200 | 8,71 | 0,157 |
| SH130E | 1201 | 1800 | 9,99 | 0,230 |
| SH130E | 1801 | 3000 | 13,82 | 0,293 |

| Leviat ref | Length range (mm) | | Lintel weight (kg/m) | EPS weight (kg/m) |
|---|---|---|---|---|
| | Min | Max | | |
| SH150 | 750 | 1500 | 8,63 | 0,184 |
| SH150 | 1501 | 2100 | 9,26 | 0,226 |
| SH150 | 2101 | 2400 | 11,08 | 0,350 |
| SH150 | 2401 | 3600 | 13,85 | 0,350 |
| SH150E | 750 | 1200 | 8,92 | 0,181 |
| SH150E | 1201 | 1800 | 10,17 | 0,265 |
| SH150E | 1801 | 3000 | 14,29 | 0,350 |
| SU50 | 900 | 1800 | 11,05 | 0,037 |
| SU50 | 1801 | 2400 | 13,39 | 0,037 |
| SU50E | 900 | 1800 | 11,36 | 0,037 |
| SU50E | 1801 | 2400 | 13,77 | 0,037 |
| SU70 | 900 | 1800 | 11,39 | 0,056 |
| SU70 | 1801 | 2400 | 13,73 | 0,056 |
| SU70E | 900 | 1800 | 11,76 | 0,056 |
| SU70E | 1801 | 2400 | 14,19 | 0,056 |
| SU90 | 900 | 1800 | 11,79 | 0,079 |
| SU90 | 1801 | 2400 | 14,16 | 0,079 |
| SU90E | 900 | 1800 | 12,16 | 0,079 |
| SU90E | 1801 | 2400 | 14,62 | 0,079 |
| SU110 | 900 | 1800 | 12,29 | 0,099 |
| SU110 | 1801 | 2400 | 14,71 | 0,099 |
| SU110E | 900 | 1800 | 12,66 | 0,099 |
| SU110E | 1801 | 2400 | 15,17 | 0,099 |
| SU130 | 900 | 1800 | 12,75 | 0,122 |
| SU130 | 1801 | 2400 | 15,20 | 0,122 |
| SU130E | 900 | 1800 | 13,12 | 0,122 |
| SU130E | 1801 | 2400 | 15,66 | 0,122 |
| SU150 | 900 | 1800 | 13,27 | 0,144 |
| SU150 | 1801 | 2400 | 15,77 | 0,144 |

| Leviat ref | Length range (mm) | | Lintel weight (kg/m) | EPS weight (kg/m) |
|---|---|---|---|---|
| | Min | Max | | |
| SU150E | 900 | 1800 | 13,64 | 0,144 |
| SU150E | 1801 | 2400 | 16,23 | 0,144 |
| SUX50 | 900 | 3000 | 16,25 | 0,055 |
| SUX50 | 3001 | 4800 | 19,16 | 0,055 |
| SUX50E | 900 | 3000 | 16,71 | 0,055 |
| SUX50E | 3001 | 4800 | 19,71 | 0,055 |
| SUX70 | 900 | 3000 | 16,59 | 0,088 |
| SUX70 | 3001 | 4800 | 19,51 | 0,088 |
| SUX70E | 900 | 3000 | 17,06 | 0,088 |
| SUX70E | 3001 | 4800 | 20,06 | 0,088 |
| SUX90 | 900 | 3000 | 16,97 | 0,122 |
| SUX90 | 3001 | 4800 | 19,89 | 0,122 |
| SUX90E | 900 | 3000 | 17,43 | 0,122 |
| SUX90E | 3001 | 4800 | 20,45 | 0,122 |
| SUX110 | 900 | 3000 | 17,44 | 0,155 |
| SUX110 | 3001 | 4800 | 20,40 | 0,155 |
| SUX110E | 900 | 3000 | 17,90 | 0,155 |
| SUX110E | 3001 | 4800 | 20,95 | 0,155 |
| SUX130 | 900 | 3000 | 17,89 | 0,185 |
| SUX130 | 3001 | 4800 | 20,88 | 0,185 |
| SUX130E | 900 | 3000 | 18,35 | 0,185 |
| SUX130E | 3001 | 4800 | 21,43 | 0,185 |
| SUX150 | 900 | 3000 | 18,42 | 0,216 |
| SUX150 | 3001 | 4800 | 21,45 | 0,216 |
| SUX150E | 900 | 3000 | 18,88 | 0,216 |
| SUX150E | 3001 | 4800 | 22,00 | 0,216 |

Finished product weight = (Lintel weight + EPS weight) * Length (m)

Visual representation of the product



UN CPC code:
42190 - Other structures (except prefabricated buildings) and parts of structures, of iron, steel or aluminium; plates, rods, angles, shapes, sections, profiles, tubes and the like, prepared for use in structures, of iron, steel or aluminium; props and similar equipment for scaffolding, shuttering or pitpropping.

Product description: Ancon insulated cavity wall and box beam lintels are manufactured from stainless steel and incorporate expanded polystyrene (EPS) insulation to help reduce thermal bridging at wall openings. Designed for use in cavity wall construction, they provide structural support over doors, windows and other openings while contributing to improved thermal performance of the building envelope. Combining durability, corrosion resistance and load-bearing capability, these lintels offer a reliable solution for a wide range of residential and commercial applications.

The product is manufactured by cutting and bending stainless steel plates into the required shape. Some products consist of multiple components, which are welded together to form the final assembly. The EPS insulation bars are cut to size before being incorporated into the product.

Name and location of production site(s):
Leviat Limited, President Way | President Park | Sheffield | S4 7UR | United Kingdom

Name of manufacturer: Leviat Limited

References to any relevant websites for more information or explanatory materials:
https://www.leviat.com/

# CONTENT DECLARATION

The product is entirely made of stainless steel. An average composition is considered.

| Product content | Mass, kg | Post-consumer recycled material, mass-% of product | Biogenic material, mass-% of product | Biogenic material, kg C/product or declared unit |
|---|---|---|---|---|
| Stainless steel | 0.97 | 44.70% | 0.00% | 0.00 |
| Expandend polystyrene | 0.03 | 0.00% | 0.00% | 0.00 |
| **TOTAL** | **1.00** | **44.70%** | **0.00%** | **0.00** |

| Packaging materials | Mass, kg | Mass-% (versus the product) | Biogenic material, kg C/product or declared unit |
|---|---|---|---|
| Plastic wrap | 0.015 | 1.53% | - |
| Pallet (wood) | 0.185 | 18.50% | 0.08 |
| **TOTAL** | **0.200** | **20.03%** | **0.08** |

For construction products with EPDs compliant with the EN 15804 standard, the EPD must declare the substances contained in the products that are listed on the "Candidate List of Substances of Very High Concern for Authorization" when their content exceeds the thresholds for registration with the European Chemicals Agency (0.1% by weight/weight).

The product does not contain any substances listed on the SVHC list

# LCA INFORMATION

Declared unit: 1 kg of finished product, packed and ready for shipment, based on the average results of the product group. The average environmental profile is calculated as the arithmetic mean of the maximum and minimum profiles of the product family.

Reference service life: for this product, no specific service life is stated. This is because lintels are permanently installed within the building structure, and their useful life therefore aligns with the lifespan of the building itself. It does not depend on the lintel as an individual component.

Time representativeness: All specific data from the manufacturer are referred to year 2023.

Geographical scope: Global for raw materials supply and transport (A1-A2), UK for manufacturing (A3), UK+IE for distribution, installation and End of life stages (A4, A5, C1-C4).

Database(s) and LCA software used: Ecoinvent v.3.10, SimaPro v.10.2.0.2.
The study is based on EN 15804 reference package 3.1.

Description of system boundaries:
Cradle-to-gate with options, modules C1-C4, module D and modules A4 and A5. (A1–A3 + A4 + A5 + C + D).
Modules B1 to B7 are not included because the product is permanently embedded in the building structure and does not require energy, water, maintenance, repair, or replacement during its service life.
The system boundaries include:

- **A1 - Raw material supply:** Production of raw materials and semi-finished stainless steel products. This includes the processing of semi-finished products upstream in the supply chain;
- **A2 – Transport to the manufacturer:** Transportation of raw materials (semi-finished products, purchased components) to the company's production site;
- **A3 - Manufacturing:** Manufacturing of the products at Leviat's production site. Production and consumption of electricity used in manufacturing processes. Production and consumption of fossil fuels used for internal product handling and for the management of waste (including packaging waste) generated by the plant. The processing steps included in this module are:
  - mechanical processing (cutting from plate and bending);
  - welding;
  - water-cutting of insulation;
  - packing and storage;
- **A4 – Market distribution of the analysed products;**
- **A5 – Installation:** Product installation and EoL of the relevant packaging. Only the product itself is considered: all auxiliaries (bolts, screws, grouts) are excluded;
- **C1 – Deconstruction, demolition:** Deconstruction or demolition process;
- **C2 – Transport of waste to treatment/disposal facilities**;
- **C3 – Waste processing:** Waste treatment for recovery/recycling preparation;
- **C4 – Disposal:** Final disposal.

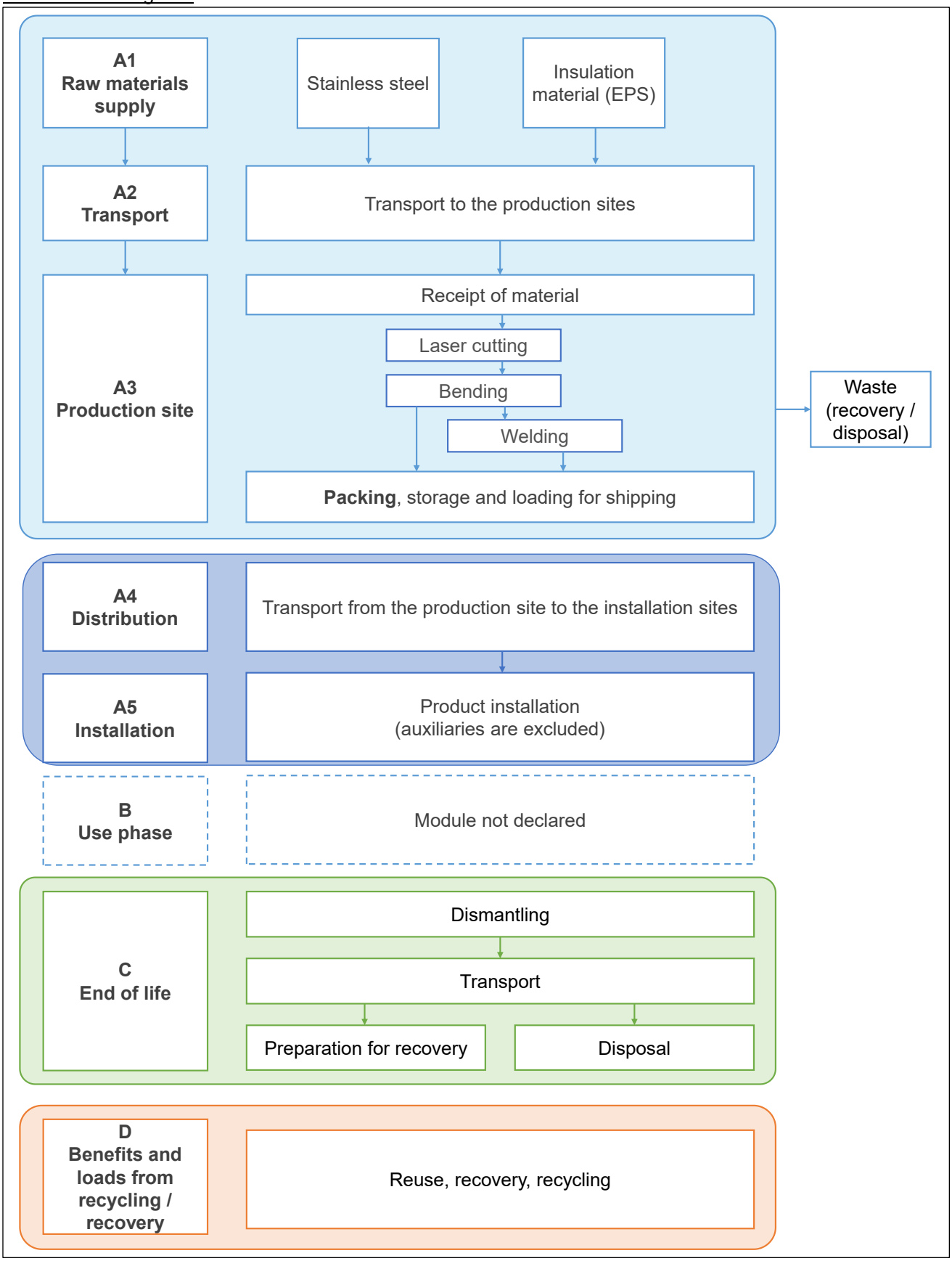
**Module D:** potential benefits and impacts related to recovery-reuse-recycling of materials and energy along the life cycle. In this module, benefits and/or impacts related to, for example, the potential recycling of materials at the end-of-life of the products under study are assessed. The modelling of recovery-reuse-recycling benefits is carried out according to the requirements of EN 15804:2012 + A2:2019 § 6.4.3.3.

In accordance with the PCR 2019:14 v2.0.1, the system boundaries do not include:

- Input and output flows related to personnel (e.g., energy used in head offices and sales offices, transports of employees to and from workplace, etc);
- Infrastructure and capital goods, with exception for electricity and heat in module A3 and electricity/heat for steel production[1], in accordance with the requirements of PCR 2019:14 (§4.3.6).
- Impacts related to the production and transport of packaging materials of incoming semi-finished products.

[1] The exclusion of capital goods and infrastructure is limited to the main processes (foreground processes, directly modeled in the study). Impacts related to these processes may still be included in the background data (e.g., Ecoinvent data).

Process flow diagram:



More information:
Modules C and D are modelled according to the distribution volumes of the product.

Cut-off:
The cut-off rules in EN 15804:2012 + A2:2019 §6.3.6 and PCR 2019:14 §4.4 apply.
The following contributions were excluded from the model:

- Suppliers with a supply share below 0.5% in the reference year;
- Any residual energy recovery potentially associated with the incineration of the insulation material.

No other contributions were intentionally excluded from the study.

Allocation rules:
In the case of multifunctional situations, i.e., systems that generate multiple products, the allocation rules set out in PCR 2019:14 apply.
In this LCA study, allocation was applied according to the rules defined in EN 15804:2012 + A2:2019 §6.4.3 and in PCR 2019:14 v 2.0.1 §4.5.1.
For general plant consumption, including electricity, fuels, water, mass allocation was performed on the entire plant production (in terms of kg), as it was not possible to assign specific portions to individual production lines. The consumption of welding gases was allocated based on the actual welded length of each product.
Allocation on the total production was also applied to general waste, except for specific waste streams associated with process waste generated during manufacturing.

Modelling of infrastructure/capital goods:
In accordance with Section 4.3.6 of PCR 2019:14 version 2.0.1, the datasets used for modelling electricity and heat include the impacts associated with the construction of the related infrastructure.

Electricity mix:
The electricity used in the production process (modules A1-A3) was modelled based on the REGO certificates assigned to Leviat for the supply period 1st April 2023 – 31st March 2024. The electricity mix is composed of 55% onshore wind, 34% offshore wind, 6% ohotovoltaic, 5% hydroelectric. Electricity is generated primarily in England and Scotland.The GWP-GHG of the electricity mix used to model module A3 is 2.72E-02kg CO2 eq./kWh.

Recycled raw materials:
The recycled steel has an impact on the GWP-GHG indicator of 3.32E-01 kg $CO_2$eq / kg. This figure refers to the actual mix of pre- and post-consumer recycled material contained in the purchased raw materials. Recycled materials enter the system together with the impact of recycling, while the impact of the material itself and the preparation to recycling are allocated to the previous system.

Biogenic carbon:
The product itself does not contain biogenic carbon. The biogenic carbon content of the packaging was calculated manually using data from the relevant Ecoinvent datasets. The corresponding amount of biogenic $CO_2$-eq was then determined and accounted for as an uptake in modules A1–A3 and as an emission in module A5. As a result, the biogenic $CO_2$-eq balance across modules A1–A5 is zero.

Module A4 – Transport stage:
Module A4 applies to the Leviat's manufacturing site to installation sites and is modelled according to the distribution and logistics data for 2023. Ecoinvent datasets on relevant freight transport have been used to model fuel type and consumption and capacity utilisation. This includes direct fuel exhaust emissions, environmental impacts of fuel production, and related infrastructure emissions.

| Transport by road | Transport by sea (short distance) |
|---|---|
| Transport, freight, lorry >32 metric ton, EURO5 {RER} | Transport, freight, sea, ferry {GLO} |
| Diesel | Heavy fuel oil |
| Loaded to maximum mass capacity | |

Module A5 – Installation:
In Module A5, the installation scenario only covers the installation of the product itself and does not take into account any auxiliary materials or equipment that may be required for the installation, as auxiliaries fall outside the scope of this EPDs. This approach is also intended to provide modular information along the supply chain, ensuring that the environmental impact of a building containing these products can be derived from the specific materials and auxiliaries used, thereby avoiding double counting.
There is no specific measurement of the actual energy consumption required to install the product, as most of it can be installed manually. A conservative approach has therefore been applied, assuming that the same amount of energy considered in the dismantling scenario (C1) is also used for installation.
The end-of-life modelling for shipping packaging is based on the most recent statistics available from the Eurostat and Defra databases.

| Material | Energy recovery | Recovery (recycling + backfilling | Incineration | Landfilling |
|---|---|---|---|---|
| Wood | 2% | 54% | 42% | 1% |
| Plastic | 1% | 92% | 0% | 6% |

Assumed 50 km of transport to waste treatment facilities.

Assumptions for end-of-life scenarios (modules C1-C4) and resource recovery stage (module D):
For streams that leave system boundaries, the polluter pays principle applies, which means that the system boundary to the subsequent product system is set where the waste (e.g. the discarded product) reaches the end-of-waste state (PCR 2019:14, §4.5.2).
In this study, and in compliance with PCR 2019:14 §4.5.1, a conservative approach is adopted, and no environmental flows are allocated to such co-products; instead, all impacts are attributed entirely to the main products.

*Module C1:* The process of dismantling lintels is mainly associated with the process of dismantling the building in which it is contained. In accordance with PCR 2019:14 §4.8.4, it is assumed that the energy source used for this purpose is diesel fuel and that the average energy consumption at this stage is 1.1 kWh/ton.

*Module C2:* Transport of materials to recovery or disposal facilities was modelled assuming an average transport distance of 80 km by road using a 16–32 tonne Euro 5 lorry, in accordance with PCR 2019:14, §4.8.4. Similarly, the transport of EPS waste destined for incineration was modelled using an average

transport distance of 130 km. The transport scenario reflects the typical market distribution of the product within the relevant geographical reference area.

*Module C3-C4:* the end-of-life scenario includes all operations necessary to treat the product until the end-of-waste status is reached.

The following considerations apply:

- The product is composed of steel and expanded polystyrene (EPS). Specific end-of-life scenarios are applied to the steel parts, distinguishing between recycling and landfill disposal, while the insulation material is assumed to be incinerated. As a conservative assumption, no energy recovery is considered from the incineration process;
- The share of material sent for recycling in the EU is derived from the Product Environmental Footprint (PEF);
- The share of material sent for disposal is deduced from the PEF data on recycling;
- In accordance with PCR 2019:14 §4.8.4, for Module C3 - Waste Processing, an average diesel consumption is assumed, consisting of 1.8 kWh/ton for Loading and unloading at sorting facility and 7.4 kWh/ton for the Fragging of steel. An average electricity consumption of 2.2 kWh/ton is also assumed for Mechanical sorting.
- In accordance with PCR 2019:14 §4.8.4, for Module C4 – Disposal, it is assumed an average diesel consumption of 1.6 kWh/ton for Compacting of inert construction waste for landfills (including backfilling).

Module D:

The modelling of the scenario relating to the potential benefits and impacts associated with the reuse, recovery, and recycling of the materials under assessment follows the guidelines of EN 15804:2012 + A2:2019 §6.4.3.3 and PCR 2019:14 v 2.0.1 §4.5.4.

It is assumed that there is no loss of material quality during the recycling process; therefore, the quality ratio between the recovered output material and the replaced material (QRout/QSub) is considered to be 1.

The benefits and loads are calculated for net flows of materials across the system boundary, i.e. materials to be recycled or recovered leaving the system minus recycled materials used in manufacture. The contribution of EPS to module D is 0, as this material is considered 100% incinerated without energy recovery and therefore the benefits and loads related to the insulated products are only derived from steel. Any residual energy recovery that might be linked to incineration is not accounted for, due to the very low relevance of the insulation in terms of mass in the product.

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

| | Product stage | | | Distribution/ installation stage | | Use stage | | | | | | | End-of-life stage | | | | Beyond product life cycle |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | X | X | ND | ND | ND | ND | ND | ND | ND | X | X | X | X | X |
| Geography | GLO | GLO | UK | UK+IE | UK+IE | - | - | - | - | - | - | - | UK+ IE | UK+ IE | UK+ IE | UK+ IE | UK+IE |
| Share of primary data | 6.7% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | < 10% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Summary of Data Quality Assessment:

As required by section 4.6.5 of the PCR, the following table provides a summary of the data quality assessment (DQA) for the datasets that contribute to at least 80% of the results for each of the declared environmental impact indicators.

| Data Quality Aspect | Details / Description |
|---|---|
| **Data Quality Scheme** | EN 15804:2012+A2:2019, Annex E, Table E.1 |
| **Use of poor/very poor data** | No poor/very poor data have been used. |
| **Use of Fair data with more than 30 % of a core impact** | No fair data have been used for relevant processes. |
| **Data Collection period for raw data** | The data for modules A1, A2, A3 and A4 were collected by means of questionnaires completed by Leviat personnel and refer to the production year 2023. Producer-specific data refer mostly to the year 2023, while some information (e.g. the REGO mix) refer to a 12-months period ranging from 2023 and 2024. The disposal and recovery scenarios described in modules C1, C2, C3, and C4, as well as module D, are based on the latest statistics and literature data. |
| **Geography** | Global for raw materials supply and transport (A1-A2), UK for manufacturing (A3), UK+IE for distribution and End of life stages (A4, C1-C4). |
| **Geography and technology** | The product is manufactured in Leviat Sheffield plant. The product modelling accounts for the contribution of different steel suppliers. The manufacturing processes are represented comprehensively: from plate reception, through intermediate operations such as steel and insulation cutting, welding, to final packaging. The modelling considers all relevant aspects of the |

| | |
|---|---|
| | production processes, including energy and fuels consumption, as well as the geographical context of the manufacturing activities (UK). |
| **LCI/LCA database** | Ecoinvent v.3.10, SimaPro v.10.2.0.2 |
| **EPD used** | For the modelling of the stainless steel from a specific supplier, results of the relevant EPD were used (EPD-IES-0017255). |
| **Other information** | The end-of-life scenario has been modelled in accordance with PCR 2019:14 §4.8.4.<br>The modelling includes the energy required for product dismantling, as well as the transport to treatment facilities or landfills, considering the market distribution of the product.<br>For the steel components, specific end-of-life scenarios have been applied, distinguishing between recycling and landfill disposal. The insulation material is assumed to be incinerated, with no energy recovery considered. The shares of recycled and disposed steel are based on Product Environmental Footprint (PEF) data.<br>The modelling also accounts for energy use during waste processing and disposal activities, in line with the assumptions described in PCR 2019:14. |

The data quality information presented in this EPD has been prepared and reported in accordance with the requirements set forth in UNI EN 15941:2024 and complies with the data quality criteria specified in EN 15804:2012+A2:2019.

As requested by PCR, the following table provides information on the quality of the data used for processes contributing more than 10% to the overall GWP-GHG indicator value for the product considered.

| Process | Source type | Source | Reference year | Data category | Share of primary data, of GWP-GHG results for A1-A3 |
|---|---|---|---|---|---|
| Generation of electricity used in manufacturing of product | Database | Ecoinvent v3.10, REGO certificate | 2023 | Primary data | **0.8%** |
| Transport of steel to manufacturing site | Database | Ecoinvent v.3.10 | 2023 | Primary data | **5.8%** |
| Production of steel | Database Suppliers EPD | Ecoinvent v.3.10 EPD-IES-0017255 | 2023 | Assumed 100% secondary data | **0.0%** |
| Total share of primary data, of GWP-GHG results for A1-A3 * | | | | | **6.7%** |

* *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.*

*Totals may not correspond due to rounding.*

# ENVIRONMENTAL PERFORMANCE

## LCA results of the product(s) - main environmental performance results

The results presented in the following sections refer to the average results of the different variants of the product analysed.

The difference between the declared average GWP-GHG result, and the products with GWP-GHG results furthest away, for modules A1-A3, is < 10 %.

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.

The characterization method used for results calculation does not present a regionalisation for elementary flows related to Water Depletion Potential.

All non-zero values for the Secondary materials indicator in modules other than A1-A3 are modelling artefacts.

Inventory indicators relating to the use of renewable and non-renewable secondary fuels, as well as hazardous and non-hazardous waste disposed, have been assumed 0, as these flows are not significant for the products under analysis and their modelling would be subject to a high level of uncertainty.

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

## Mandatory impact category indicators according to EN 15804

| Results per declared unit | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-total | kg $CO_2$ eq. | 2.55E+00 | 2.80E-02 | 3.08E-01 | 3.72E-04 | 1.27E-02 | 5.29E-03 | 1.04E-01 | -1.64E-01 |
| GWP-fossil | kg $CO_2$ eq. | 2.83E+00 | 2.80E-02 | 3.45E-03 | 3.72E-04 | 1.27E-02 | 5.28E-03 | 1.04E-01 | -1.64E-01 |
| GWP-biogenic | kg $CO_2$ eq. | -2.81E-01 | 1.08E-06 | 3.05E-01 | 1.60E-08 | 4.77E-07 | 1.70E-06 | 4.19E-06 | 1.50E-04 |
| GWP-luluc | kg $CO_2$ eq. | 2.46E-03 | 7.22E-07 | 5.77E-07 | 1.28E-08 | 3.11E-07 | 9.07E-06 | 2.90E-06 | 1.38E-04 |
| ODP | kg CFC 11 eq. | 1.39E-05 | 5.67E-10 | 6.10E-11 | 5.85E-12 | 2.58E-10 | 8.37E-11 | 1.14E-10 | 2.97E-10 |
| AP | mol $H^+$ eq. | 1.20E-02 | 1.43E-04 | 1.17E-05 | 3.48E-06 | 3.15E-05 | 3.79E-05 | 4.06E-05 | -4.35E-04 |
| EP-freshwater | kg P eq. | 3.72E-04 | 2.40E-08 | 1.79E-08 | 3.51E-10 | 1.06E-08 | 6.59E-08 | 1.16E-07 | -5.77E-06 |
| EP-marine | kg N eq. | 2.28E-03 | 3.51E-05 | 4.77E-06 | 1.63E-06 | 1.21E-05 | 1.64E-05 | 1.49E-05 | -1.10E-04 |
| EP-terrestrial | mol N eq. | 2.51E-02 | 3.89E-04 | 5.20E-05 | 1.79E-05 | 1.32E-04 | 1.79E-04 | 1.60E-04 | -1.32E-03 |
| POCP | kg NMVOC eq. | 9.01E-03 | 1.48E-04 | 1.83E-05 | 5.33E-06 | 5.49E-05 | 5.40E-05 | 4.94E-05 | -5.22E-04 |
| ADP-minerals&metals* | kg Sb eq. | 5.28E-05 | 8.70E-10 | 2.92E-10 | 1.55E-11 | 4.18E-10 | 2.75E-10 | 3.99E-09 | 2.89E-08 |
| ADP-fossil* | MJ | 2.67E+01 | 3.77E-01 | 4.23E-02 | 4.90E-03 | 1.67E-01 | 7.59E-02 | 8.17E-02 | -8.35E-01 |
| WDP* | $m^3$ | 1.31E+00 | 1.58E-04 | 3.99E-05 | 3.86E-06 | 7.10E-05 | 2.09E-04 | 0.00E+00 | 7.65E-03 |
| 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 | | | | | | | |

** 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.*
*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.*

## Additional mandatory and voluntary impact category indicators

| Results per declared unit | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-GHG[2] | kg $CO_2$ eq. | 2.83E+00 | 2.80E-02 | 3.47E-03 | 3.72E-04 | 1.27E-02 | 5.29E-03 | 1.04E-01 | -1.64E-01 |

Additional environmental impact indicators are not declared in this EPD. Detailed results for these indicators are available in the product's LCA Report, referenced in the Bibliography.

## Resource use indicators

| Results per declared unit | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **C1** | **C2** | **C3** | **C4** | **D** |
| PERE* | MJ | 6.11E+00 | 1.26E-03 | 1.77E-01 | 1.10E-05 | 5.91E-04 | 3.49E-03 | 2.49E-03 | 2.77E-01 |
| PERM* | MJ | 2.27E-01 | 0.00E+00 | -1.76E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | MJ | 6.33E+00 | 1.26E-03 | 8.89E-04 | 1.10E-05 | 5.91E-04 | 3.49E-03 | 2.49E-03 | 2.77E-01 |
| PENRE* | MJ | 2.66E+01 | 3.77E-01 | 9.90E-02 | 4.90E-03 | 1.67E-01 | 7.59E-02 | 8.17E-02 | -8.35E-01 |
| PENRM* | MJ | 6.74E-02 | 0.00E+00 | -5.67E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | MJ | 2.67E+01 | 3.77E-01 | 4.23E-02 | 4.90E-03 | 1.67E-01 | 7.59E-02 | 8.17E-02 | -8.35E-01 |
| SM | kg | 6.05E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | $m^3$ | 3.58E-01 | 6.76E-05 | 4.68E-05 | 1.04E-06 | 3.03E-05 | 1.37E-04 | 0.00E+00 | 1.16E-02 |
| 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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | | | | | | | |

**Primary energy contained in the packaging material is not accounted for and is considered lost.*

[2] 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.

## Waste indicators

| Results per declared unit | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **C1** | **C2** | **C3** | **C4** | **D** |
| Hazardous waste disposed* | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.25E-01 | 0.00E+00 | 0.00E+00 |
| Non-hazardous waste disposed* | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Radioactive waste disposed | kg | 6.13E-05 | 3.32E-08 | 2.59E-08 | 2.50E-10 | 1.57E-08 | 1.04E-07 | 4.97E-08 | 8.73E-06 |

**Hazardous waste disposed and Non-hazardous waste disposed indicators are set to 0 because all the relevant waste treatment processes are included within the system boundaries.*

## Output flow indicators

| Results per declared unit | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **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 | 0.00E+00 | 0.00E+00 |
| Material for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.25E-01 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 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 | 1.76E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy. thermal | MJ | 0.00E+00 | 0.00E+00 | 3.41E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

## Additional LCA results (other environmental performance results) of the product(s)

As per the PCR, results for the 100% recycling and 100% disposal end-of-life scenarios are provided below.
The results of the 100% recycling end-of-life scenario are shown below.

### Mandatory impact category indicators according to EN 15804 (100% recycling end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-total | kg $CO_2$ eq. | 3.72E-04 | 1.24E-02 | 6.22E-03 | 1.03E-01 | -2.57E-01 |
| GWP-fossil | kg $CO_2$ eq. | 3.72E-04 | 1.24E-02 | 6.21E-03 | 1.03E-01 | -2.58E-01 |
| GWP-biogenic | kg $CO_2$ eq. | 1.60E-08 | 4.68E-07 | 2.00E-06 | 1.78E-06 | 2.35E-04 |
| GWP-luluc | kg $CO_2$ eq. | 1.28E-08 | 3.05E-07 | 1.07E-05 | 2.72E-06 | 2.16E-04 |
| ODP | kg CFC 11 eq. | 5.85E-12 | 2.53E-10 | 9.85E-11 | 6.94E-11 | 4.65E-10 |
| AP | mol $H^+$ eq. | 3.48E-06 | 3.09E-05 | 4.46E-05 | 2.47E-05 | -6.81E-04 |
| EP-freshwater | kg P eq. | 3.51E-10 | 1.04E-08 | 7.75E-08 | 7.37E-08 | -9.04E-06 |
| EP-marine | kg N eq. | 1.63E-06 | 1.19E-05 | 1.93E-05 | 1.08E-05 | -1.72E-04 |
| EP-terrestrial | mol N eq. | 1.79E-05 | 1.30E-04 | 2.11E-04 | 1.15E-04 | -2.07E-03 |
| POCP | kg NMVOC eq. | 5.33E-06 | 5.39E-05 | 6.35E-05 | 3.33E-05 | -8.17E-04 |
| ADP-minerals&metals* | kg Sb eq. | 1.55E-11 | 4.10E-10 | 3.23E-10 | 3.61E-09 | 4.52E-08 |
| ADP-fossil* | MJ | 4.90E-03 | 1.64E-01 | 8.92E-02 | 4.88E-02 | -1.31E+00 |
| WDP* | $m^3$ | 3.86E-06 | 6.97E-05 | 2.46E-04 | 4.56E-04 | 1.20E-02 |
| 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 on these results are high or as there is limited experienced with the indicator.*

## Additional mandatory and voluntary impact category indicators (100% recycling end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-GHG[3] | kg $CO_2$ eq. | 3.72E-04 | 1.24E-02 | 6.22E-03 | 1.03E-01 | -2.57E-01 |

## Resource use indicators (100% recycling end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| PERE* | MJ | 1.10E-05 | 5.80E-04 | 4.11E-03 | 1.94E-03 | 4.34E-01 |
| PERM* | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | MJ | 1.10E-05 | 5.80E-04 | 4.11E-03 | 1.94E-03 | 4.34E-01 |
| PENRE* | MJ | 4.90E-03 | 1.64E-01 | 8.92E-02 | 4.88E-02 | -1.31E+00 |
| PENRM* | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | MJ | 4.90E-03 | 1.64E-01 | 8.92E-02 | 4.88E-02 | -1.31E+00 |
| SM | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | $m^3$ | 1.04E-06 | 2.98E-05 | 1.61E-04 | 2.20E-04 | 1.82E-02 |
| 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 | | | | | |

**Primary energy contained in the packaging material is not accounted for and is considered lost.*

[3] 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.

## Waste indicators (100% recycling end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| Hazardous waste disposed* | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Non-hazardous waste disposed* | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Radioactive waste disposed | kg | 2.50E-10 | 1.54E-08 | 1.22E-07 | 4.05E-08 | 1.37E-05 |

**Hazardous waste disposed and Non-hazardous waste disposed indicators are set to 0 because all the relevant waste treatment processes are included within the system boundaries.*

## Output flow indicators (100% recycling end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **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 |
| Material for recycling | kg | 0.00E+00 | 0.00E+00 | 9.70E-01 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery | kg | 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 |
| Exported energy, thermal | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

The results of the 100% landfill end-of-life scenario are shown below.

## Mandatory impact category indicators according to EN 15804 (100% landfill end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-total | kg $CO_2$ eq. | 3.72E-04 | 1.24E-02 | 0.00E+00 | 1.12E-01 | 0.00E+00 |
| GWP-fossil | kg $CO_2$ eq. | 3.72E-04 | 1.24E-02 | 0.00E+00 | 1.12E-01 | 0.00E+00 |
| GWP-biogenic | kg $CO_2$ eq. | 1.60E-08 | 4.68E-07 | 0.00E+00 | 1.79E-05 | 0.00E+00 |
| GWP-luluc | kg $CO_2$ eq. | 1.28E-08 | 3.05E-07 | 0.00E+00 | 3.94E-06 | 0.00E+00 |
| ODP | kg CFC 11 eq. | 5.85E-12 | 2.53E-10 | 0.00E+00 | 3.68E-10 | 0.00E+00 |
| AP | mol $H^+$ eq. | 3.48E-06 | 3.09E-05 | 0.00E+00 | 1.31E-04 | 0.00E+00 |
| EP-freshwater | kg P eq. | 3.51E-10 | 1.04E-08 | 0.00E+00 | 3.58E-07 | 0.00E+00 |
| EP-marine | kg N eq. | 1.63E-06 | 1.19E-05 | 0.00E+00 | 3.84E-05 | 0.00E+00 |
| EP-terrestrial | mol N eq. | 1.79E-05 | 1.30E-04 | 0.00E+00 | 4.13E-04 | 0.00E+00 |
| POCP | kg NMVOC eq. | 5.33E-06 | 5.39E-05 | 0.00E+00 | 1.41E-04 | 0.00E+00 |
| ADP-minerals&metals* | kg Sb eq. | 1.55E-11 | 4.10E-10 | 0.00E+00 | 6.12E-09 | 0.00E+00 |
| ADP-fossil* | MJ | 4.90E-03 | 1.64E-01 | 0.00E+00 | 2.68E-01 | 0.00E+00 |
| WDP* | $m^3$ | 3.86E-06 | 6.97E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 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 on these results are high or as there is limited experienced with the indicator.*

## Additional mandatory and voluntary impact category indicators (100% landfill end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-GHG[4] | kg $CO_2$ eq. | 3.72E-04 | 1.24E-02 | 0.00E+00 | 1.12E-01 | 0.00E+00 |

## Resource use indicators (100% landfill end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| PERE* | MJ | 5.49E-06 | 2.90E-04 | 0.00E+00 | 2.01E-03 | 0.00E+00 |
| PERM* | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | MJ | 5.49E-06 | 2.90E-04 | 0.00E+00 | 2.01E-03 | 0.00E+00 |
| PENRE* | MJ | 2.45E-03 | 8.20E-02 | 0.00E+00 | 1.16E-01 | 0.00E+00 |
| PENRM* | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | MJ | 2.45E-03 | 8.20E-02 | 0.00E+00 | 1.16E-01 | 0.00E+00 |
| SM | kg | 2.45E-03 | 8.20E-02 | 0.00E+00 | 1.52E-01 | 0.00E+00 |
| RSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | $m^3$ | 5.22E-07 | 1.49E-05 | 0.00E+00 | 0.00E+00 | 0.00E+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 | | | | | |

**Primary energy contained in the packaging material is not accounted for and is considered lost.*

[4] 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.

## Waste indicators (100% landfill end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **C1** | **C2** | **C3** | **C4** | **D** |
| Hazardous waste disposed* | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Non-hazardous waste disposed* | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Radioactive waste disposed | kg | 2.06E-07 | 4.26E-06 | 0.00E+00 | 4.74E-01 | 0.00E+00 |

**Hazardous waste disposed and Non-hazardous waste disposed indicators are set to 0 because all the relevant waste treatment processes are included within the system boundaries.*

## Output flow indicators (100% landfill end-of-life scenario)

| Results per declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **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 |
| Material for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery | kg | 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 |
| Exported energy, thermal | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

# ADDITIONAL ENVIRONMENTAL INFORMATION

Our lintels are manufactured from stainless steel and are designed to provide structural support above window, door and other wall openings. Stainless steel offers excellent durability, corrosion resistance and recyclability, and is classified as A1 non-combustible. Insulated lintel variants incorporate EPS insulation to help reduce thermal bridging within the building envelope.

Life-cycle costing is increasingly recognized as the true way to establish the cost of building components. The use of stainless steel means no costly remedial or refurbishment measures are required during the life of the structure. At the end of a long service life, our stainless steel products are 100% recyclable. When a product finally reaches the end of its long service life, it remains a valuable source of its main alloying elements - chromium, nickel and molybdenum. These can be easily recovered and separated from the other materials and returned to the production process. Stainless steel recycling is an economically viable, self-sustaining process. There are considerable savings in energy, and reduced $CO_2$ emissions, in production methods which use recycled materials. The amount of recycled material in any stainless steel product is typically 70-90%, and as scrap availability is the limiting factor, this percentage will increase as the use of stainless steel continues to grow. The raw material produced today will not be recycled for many years. In addition to a product's end-of-life recycling, any scrap material generated during its manufacture is recycled in the same way. Leviat recycles 100% of its stainless steel scrap.

# ABBREVIATIONS

| Abbreviation | Definition |
|---|---|
| **General Abbreviations** | |
| EN | European Norm (Standard) |
| EF | Environmental Footprint |
| EPD | Environmental Product Declaration |
| GPI | General Programme Instructions |
| ISO | International Organization for Standardization |
| 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 |
| SVHC | Substances of Very High Concern |
| ND | Not Declared |
| PCR | Product Category Rules |
| PEF | Product Environmental Footprint |
| **Other Abbreviations** | |
| ADP | Abiotic Depletion Potential |
| AP | Acidification Potential |
| BoM | Bill of Materials |
| EP | Eutrophication Potential |
| EPS | Expanded polystyrene |
| EoL | End Of Life |
| EoW | End of Waste |
| GWP | Global Warming Potential |
| LCA | Life Cycle Assessment |
| LCI | Life Cycle Inventory |
| LCIA | Life Cycle Impact Assessment |
| LDPE | Low-density polyethylene |

# REFERENCES

a) General Programme Instructions of International EPD System. Version 5.0.1.
b) PCR 2019:14. Construction Products. Version 2.0.1
c) EN 15804:2012 + A2:2019 + AC, Sustainability of construction works – Environmental Product Declarations – Core rules for the product category
d) ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures
e) ISO 14040:2006, Environmental management – Life cycle assessment – Principles and framework
f) ISO 14044:2006, Environmental management – Life cycle assessment – Requirements and guidelines
g) Association of Issuing Bodies, European Residual Mixes 2023
h) PlasticsEurope, Eco-profiles and Environmental Product Declarations of the European Plastics Manufacturers, April 2014; December 2016: update water balance
i) Department for Environment, Rood & Rural Affairs (DEFRA). UK Waste Data: UK Government. Available from: https://www.gov.uk/government/statistics/uk-waste-data.
j) Eurostat waste database: https://ec.europa.eu/eurostat/web/waste/data/database
k) European Commission, 2021, Recommendation 2021/2279 on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations
l) Gervasio, H., Dimova, S., 2018, Model for Life Cycle Assessment (LCA) of buildings, EC JRC technical reports
m) Eurostat waste database: https://ec.europa.eu/eurostat/web/waste/data/database
n) Outokumpu. (2024). EPD-IES-0017255 - Hot rolled austenitic stainless steel. EPD International AB.
o) Studio Fieschi & soci Srl, Life Cycle Assessment (LCA) of Leviat's Lintels, 2026.

# VERSION HISTORY

**Original Version of the EPD, 2026-10-20**

EPD
INTERNATIONAL EPD SYSTEM
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