

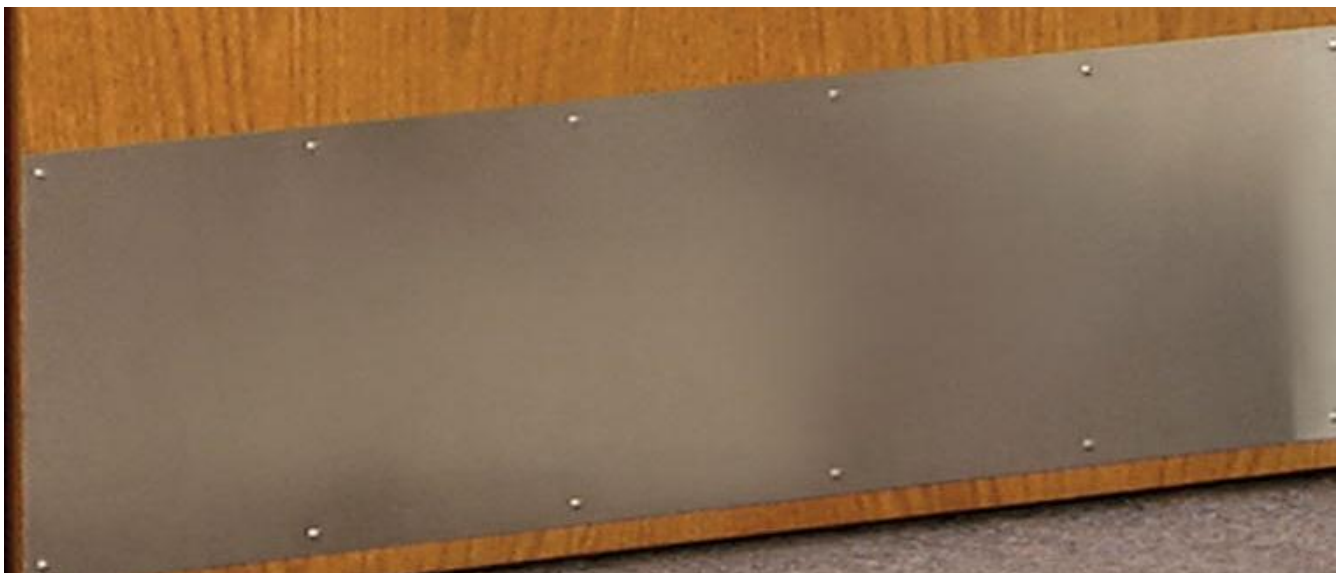
ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804




| | |
|--------------------------|--------------------------------------|
| Owner of the Declaration | ASSA ABLOY |
| Programme holder | Institut Bauen und Umwelt e.V. (IBU) |
| Publisher | Institut Bauen und Umwelt e.V. (IBU) |
| Declaration number | EPD-ASA-20150134-IBA1-EN |
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| Valid to | 17.05.2020 |

Rockwood K1050 Kick Plate
ASSA ABLOY

www.bau-umwelt.com / <https://epd-online.com>



1. General Information

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| <p>Assa Abloy</p> <hr/> <p>Programme holder IBU - Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany</p> <hr/> <p>Declaration number EPD-ASA-20150134-IBA1-EN</p> <hr/> <p>This Declaration is based on the Product Category Rules: Locks and fittings , 07.2014 (PCR tested and approved by the independent expert committee (SVA))</p> <hr/> <p>Issue date 18.05.2015</p> <hr/> <p>Valid to 17.05.2020</p> <hr/> <p></p> <hr/> <p>Prof. Dr.-Ing. Horst J. Bossemayer (President of Institut Bauen und Umwelt e.V.)</p> <hr/> <p></p> <hr/> <p>Dr.-Ing. Burkhard Lehmann (Managing Director IBU)</p> | <p>K1050 Kick Plate</p> <hr/> <p>Owner of the Declaration Rockwood Mfg. Co. 300 Main St. Rockwood, PA 15557 USA</p> <hr/> <p>Declared product / Declared unit The declaration represents One K1050 (8 X 34 US32D) Kick Plate - Standard Duty, consisting of the following items: - A 34" length of 18 gauge stainless steel coil with Polyethylene protective film attached. - A 16" X 40" X 2 mil clear polyethylene sheeting used for packaging. - Twelve # 6 X 5/8" stainless steel undercut oval head sheet metal screws. - One 1 - Corrugated folding box. 48 1/2" X 20 7/8". - 5 pieces of 20" long x 1/2" wide white plastic banding</p> <hr/> <p>Scope: This declaration and its LCA study are relevant to K1050 kick plates. The primary manufacturing processes and packaging are completed in our factory for all K1050 finish in Rockwood, Pennsylvania. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.</p> <hr/> <p>Verification The CEN Standard EN 15804 serves as the core PCR Independent verification of the declaration according to ISO 14025 <input type="checkbox"/> internally <input checked="" type="checkbox"/> externally</p> <hr/> <p></p> <hr/> <p>Dr. Wolfram Trinius (Independent verifier appointed by SVA)</p> |
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2. Product

2.1 Product description

Product name: K1050 Kick Plate

Product characteristics:
 K1050 kick plates are installed on doors to protect the doors from damage and characterized by:
 - Size (Typical Length - 2" less than door width X specified height on push side of door)
 - Finish - US32D
 - Options: Self Adhesive, Self Drilling TEK screws, beveled edges, countersunk holes, cut outs, Torx fasteners, UL Fire rated.
 This EPD is applicable to following products: K1050, K1050F.

2.2 Application

The Rockwood Manufacturing Co. kick plate K1050 (8" X 34") is intended to be used for private to commercial and public sectors for both light and heavy use areas:
 - For interior and or exterior doors
 - Designed to prevent damage to doors as well as for decorative applications.

2.3 Technical Data

The table presents the technical properties of K1050 Kick Plate:

Technical data

| Parameter | Value |
|---------------------|--------------------------------------|
| Available Finishes: | Satin Finish Stainless Steel (US32D) |
| Available Sizes (As | Up to 48" (1219 mm) |

| | |
|-------------------------|--|
| specified): | height X 120" (3048 mm) Length |
| Options: (As specified) | Self Adhesive TEK screws (Self Drilling) Beveled Edges Countersunk holes Cut outs Torx fasteners UL fire rated |

2.4 Placing on the market / Application rules

The standards that can be applied for K1050 kick plates are:
 NFPA 80 STANDARDS - 2-4.5 Protection Plates:
 Factory-installed protection plates shall be installed in accordance with the listing of the door.
 Field-installed protection plates shall be labeled and installed in accordance with the door listing.
 Exception: UL Labeling is not required where the top of the protection plate is not more than 16" (406 mm) above the bottom of the door.

2.5 Delivery status

K1050 kick plates and fasteners are delivered ready for installation. Each plate is individually packaged with fasteners attached and master packaged up to a maximum of 10 plates per carton. Package size is dependent on longest size of plate ordered.

2.6 Base materials / Ancillary materials

The average composition for K1050 is as following:

| Component | Percentage in mass (%) |
|-----------------|------------------------|
| Stainless Steel | 76.9 |
| Paper | 22.26 |
| Plastics | 1.65 |
| Total | 100.0 |

2.7 Manufacture

The K1050 series kick plates utilize a 301 alloy stainless steel sheet or coil which are sheared to size, punched and packaged in our ISO14001-2014 facility located in Rockwood, Pennsylvania.

2.8 Environment and health during manufacturing

Rockwood Manufacturing/ASSA ABLOY is committed to integrating our sustainability efforts across the organization. Our priorities are to: reduce resource and energy consumption; reduce carbon emissions; improve water and waste management; improve health and safety performance in operations; improve sustainability performance within our supply chain and enhance the sustainability performance in ASSA ABLOY's supply of door opening solutions. Inspections, audits, and reviews are conducted periodically to ensure that applicable standards are met and environmental management program are evaluated. Our Code of Conduct covers business ethics, workers' rights, human rights, environment and health & safety, consumer interests and community outreach. It provides the framework for ASSA ABLOY's daily operations.

- Employees within this manufacturing process are required to wear all standard PPE as well as protective leather arm leg and body protection.

2.9 Product processing/Installation

K1050 kick plates are distributed through a network of distributors and are installed by general contractors, end users and home owners.

2.10 Packaging

K1050 kick plates are packed in cardboard packaging.

100% of paper documents are made from recycled material.

| Material | Value (%) |
|-----------------|-----------|
| Cardboard/paper | 99.7 |
| Plastics | 0.03 |
| Total | 100.0 |

2.11 Condition of use

Under normal use, K1050 requires no routine maintenance other than regular cleaning. Cleaning requires a soft cloth and a mild soap/warm water mixture to remove any dust or dirt that may accumulate from general use.

2.12 Environment and health during use

There is no harmful emissive potential. No damage to health or impairment is expected under normal use corresponding to the intended use of the product.

2.13 Reference service life

Under normal use and with routine cleaning, the stainless steel kick plate is expected to last indefinite as there are no moving or wear parts associated with this product.

2.14 Extraordinary effects

Fire

K1050 kick plates are tested for usage in fire doors according to ANSI/UL 10B and 10C ratings.

Water

K1050 contains no substances that have any impact on water in case of a flood.

Mechanical destruction

K1050 has no properties which could be considered a danger to the environment and there would be no anticipated health or environmental issues arise as a result of mechanical destruction.

2.15 Re-use phase

The product is possible to re-use during the reference service life and be moved from one door to another. The majority, by weight, of stainless steel used can be recycled.

Manufacturing

Off cuts and scraps during the manufacturing process are reused for other products or directed to a recycling container.

Packaging

All materials incurred during installation are intended to be directed to a recycling unit by the installer.

End of life

All materials are intended to be directed to a recycling unit or returned to the factory for recycling as part of our end of life recycling process.

2.16 Disposal

No disposal is foreseen for the Rockwood K1050 kick plates nor for the corresponding packaging.

2.17 Further information

Rockwood Manufacturing Company
300 Main St.
Rockwood PA 15557

Tel: 800-458-2424

Web Address: www.rockwoodmfg.com

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of K1050 US32D Kick Plate as specified in Part B requirements on the EPD for PCR Locks and fittings: (mechanical & electromechanical locks & fittings)

Declared unit

| Name | Value | Unit |
|---------------------------|-------|------------------------|
| Declared unit | 1.693 | 1 piece of door bottom |
| Conversion factor to 1 kg | 0.591 | - |

3.2 System boundary

Type of the EPD: cradle to gate - with options
The following life cycle phases were considered:

Production stage:

- A1 – Raw material extraction and processing
- A2 – Transport to the manufacturer and
- A3 – Manufacturing

Construction stage:

- A5 – Packaging waste processing

End-of-life stage:

- C2 – Transport to waste processing
- C4 – Disposal (landfill)

This includes provision of all materials, products and energy, packaging processing and its transport, as well as waste processing up to the end-of waste state or disposal of final residues.

- D - Declaration of all benefits or recycling potential from EOL and A5.

3.3 Estimates and assumptions

EoL:

In the End-of-Life phase, for all the materials which can be recycled, a recycling scenario with 100% collection rate was assumed.

3.4 Cut-off criteria

In the assessment, all available data from the production process are considered, i.e. all raw materials used, auxiliary materials (e.g. lubricants), thermal energy consumption and electric power consumption - including material and energy flows contributing less than 1% of mass or energy (if available). In case a specific flow contributing less than 1% in mass or energy is not available, worst case assumption proxies are selected to represent the respective environmental impacts. Impacts relating to the production of machines and facilities required during production are out of the scope of this assessment.

3.5 Background data

For life cycle modeling of the considered products, the GaBi 6 Software System for Life Cycle Engineering, developed by PE INTERNATIONAL AG, is used /GaBi 6 2013/. The GaBi-database contains consistent and documented datasets which are documented in the online GaBi-documentation /GaBi 6 2013D/.

To ensure comparability of results in the LCA, the basic data of GaBi database were used for energy, transportation and auxiliary materials.

3.6 Data quality

The requirements for data quality and background data correspond to the specifications of the /IBU PCR PART A/.

PE INTERNATIONAL performed a variety of tests and validations during the commission of the present study in order to ensure its quality of the present document and results. This obviously includes an extensive review of project-specific LCA models as well as the background data used.

The technological background of the collected data reflects the physical reality of the declared products. The datasets are complete and conform to the system boundaries and the criteria for the exclusion of inputs and outputs.

All relevant background datasets are taken from the GaBi 6 software database. The last revision of the used background data has taken place not longer than 10 years ago.

3.7 Period under review

The period under review is 2012/13 (12 month average).

3.8 Allocation

Regarding incineration, the software model for the waste incineration plant (WIP) is adapted according to the material composition and heating value of the combusted material. In this EPD the following specific life cycle inventories for the WIP are considered:

- Waste incineration of plastic
- Waste incineration of paper

Regarding the recycling material of metals, the metal parts in the EoL are declared as end-of-waste status. Thus, these materials are considered in module D. Specific information on allocation within the background data is given in the GaBi dataset documentation.

3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

4. LCA: Scenarios and additional technical information

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment if modules are not declared (MND).

Installation into the building (A5)

| Name | Value | Unit |
|---|-------|------|
| Output substances following waste treatment on site (Paper packaging) | 0.485 | kg |

Reference service life

| Name | Value | Unit |
|------------------------|-------|------|
| Reference service life | 20 | a |

End of life (C1-C4)

| Name | Value | Unit |
|---|-------|------|
| Collected separately Plastic Parts, Stainless Steel | 1.693 | kg |
| Collected as mixed construction waste | 0 | kg |
| Reuse Plastic Parts | 0.036 | kg |
| Recycling Stainless Steel | 1.657 | kg |
| Landfilling | 0 | kg |

Reuse, recovery and/or recycling potentials (D), relevant scenario information

| Name | Value | Unit |
|---|-------|------|
| Collected separately waste type (including packaging) | 2.178 | kg |
| Recycling Stainless Steel | 76.09 | % |
| Reuse Plastic Parts | 1.65 | % |
| Reuse Paper packaging (from A5) | 22.26 | % |

5. LCA: Results

Results shown below were calculated using CML 2000 – Apr. 2013 Methodology

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

| PRODUCT STAGE | | | CONSTRUCTION PROCESS STAGE | | USE STAGE | | | | | | | END OF LIFE STAGE | | | | BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES |
|---------------------|-----------|---------------|-------------------------------------|----------|-----------|-------------|--------|----------------------------|------------------------------|------------------------|-----------------------|----------------------------|-----------|------------------|----------|---|
| Raw material supply | Transport | Manufacturing | Transport from the gate to the site | Assembly | Use | Maintenance | Repair | Replacement ⁽¹⁾ | Refurbishment ⁽¹⁾ | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| X | X | X | X | X | MND | X | MND | MND | MND | MND | MND | MND | X | MND | X | X |

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of One K1050 Kick Plate

| Parameter | Parameter | Unit | A1 - A3 | A4 | A5 | B2 | C2 | C4 | D |
|-----------|--|--|----------|-----------|----------|-----------|-----------|----------|-----------|
| GWP | Global warming potential | [kg CO ₂ -Eq.] | 6.57E+00 | 1.17E-01 | 7.04E-01 | -4.92E-02 | 5.18E-02 | 7.28E-02 | -1.94E+00 |
| ODP | Depletion potential of the stratospheric ozone layer | [kg CFC11-Eq.] | 4.19E-10 | 5.59E-13 | 3.19E-12 | 1.79E-12 | 2.48E-13 | 2.19E-13 | -1.76E-10 |
| AP | Acidification potential of land and water | [kg SO ₂ -Eq.] | 4.56E-02 | 5.34E-04 | 1.61E-04 | 1.26E-03 | 2.37E-04 | 1.85E-05 | -1.53E-02 |
| EP | Eutrophication potential | [kg (PO ₄) ³⁻ -Eq.] | 2.96E-03 | 1.22E-04 | 2.77E-05 | 7.52E-04 | 5.41E-05 | 1.40E-06 | -7.03E-04 |
| POCP | Formation potential of tropospheric ozone photochemical oxidants | [kg Ethen Eq.] | 2.60E-03 | -1.72E-04 | 1.13E-05 | 2.51E-05 | -7.65E-05 | 9.01E-07 | -6.16E-04 |
| ADPE | Abiotic depletion potential for non fossil resources | [kg Sb Eq.] | 1.28E-03 | 4.40E-09 | 1.35E-08 | 2.72E-08 | 1.95E-09 | 4.81E-09 | -5.66E-04 |
| ADPF | Abiotic depletion potential for fossil resources | [MJ] | 8.54E+01 | 1.61E+00 | 2.00E-01 | 1.54E+00 | 7.15E-01 | 3.08E-02 | -2.45E+01 |

RESULTS OF THE LCA - RESOURCE USE: One piece of One K1050 Kick Plate

| Parameter | Parameter | Unit | A1 - A3 | A4 | A5 | B2 | C2 | C4 | D |
|-----------|--|-------------------|----------|----------|----------|----------|----------|----------|-----------|
| PERE | Renewable primary energy as energy carrier | [MJ] | 2.00E+01 | - | - | - | - | - | - |
| PERM | Renewable primary energy resources as material utilization | [MJ] | 0.00E+00 | - | - | - | - | - | - |
| PERT | Total use of renewable primary energy resources | [MJ] | 2.00E+01 | 6.34E-02 | 1.85E-02 | 3.07E+00 | 2.82E-02 | 2.26E-03 | -2.88E+00 |
| PENRE | Non renewable primary energy as energy carrier | [MJ] | 9.43E+01 | - | - | - | - | - | - |
| PENRM | Non renewable primary energy as material utilization | [MJ] | 0.00E+00 | - | - | - | - | - | - |
| PENRT | Total use of non renewable primary energy resources | [MJ] | 9.43E+01 | 1.61E+00 | 2.33E-01 | 1.63E+00 | 7.17E-01 | 3.42E-02 | -2.78E+01 |
| SM | Use of secondary material | [kg] | 1.51E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | Use of renewable secondary fuels | [MJ] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | Use of non renewable secondary fuels | [MJ] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | Use of net fresh water | [m ³] | 4.71E-02 | 4.48E-05 | 2.04E-03 | 1.67E-03 | 1.99E-05 | 1.78E-04 | -1.53E-02 |

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of One K1050 Kick Plate

| Parameter | Parameter | Unit | A1 - A3 | A4 | A5 | B2 | C2 | C4 | D |
|-----------|-------------------------------|------|----------|----------|----------|----------|----------|----------|-----------|
| HWD | Hazardous waste disposed | [kg] | 6.36E-03 | 3.68E-06 | 1.61E-05 | 9.62E-05 | 1.63E-06 | 2.39E-06 | -2.38E-03 |
| NHWD | Non hazardous waste disposed | [kg] | 1.61E+00 | 2.03E-04 | 1.88E-02 | 1.28E-02 | 9.02E-05 | 6.78E-03 | -6.80E-01 |
| RWD | Radioactive waste disposed | [kg] | 3.55E-03 | 2.11E-06 | 1.35E-05 | 3.67E-05 | 9.39E-07 | 1.36E-06 | -1.32E-03 |
| CRU | Components for re-use | [kg] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | - |
| MFR | Materials for recycling | [kg] | 0.00E+00 | 0.00E+00 | 4.85E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | - |
| MER | Materials for energy recovery | [kg] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | - |
| EEE | Exported electrical energy | [MJ] | 0.00E+00 | 0.00E+00 | 9.01E-01 | 0.00E+00 | 0.00E+00 | 1.39E-01 | - |
| EET | Exported thermal energy | [MJ] | 0.00E+00 | 0.00E+00 | 2.54E+00 | 0.00E+00 | 0.00E+00 | 3.82E-01 | - |

6. LCA: Interpretation

This chapter contains an interpretation of the Life Cycle Impact Assessment categories. Stated percentages in the whole interpretation are related to the overall life cycle, excluding credits (module D).

Production phase (module A1-A3) contributes between 73 and 100% to total impact assessment. This stage is dominated by upstream emissions associated with steel- and secondary aluminum manufacturing processes.

The environmental impacts for the transport (A2) have a negligible impact within this stage.

In module D the benefits (negative values) and loads beyond the system boundary are declared for

the recycling potential of the metals and for the credits from the incineration process (energy substitution) within A5.

7. Requisite evidence

Not applicable in this EPD.

8. References

Institut Bauen und Umwelt

Institut Bauen und Umwelt e.V., Berlin (pub.):
Generation of Environmental Product Declarations (EPDs);

General principles

for the EPD range of Institut Bauen und Umwelt e.V. (IBU), 2013-04
www.bau-umwelt.de

PCR Part A

Institut Bauen und Umwelt e.V., Berlin (pub.): Product Category Rules for Construction Products from the range of Environmental Product Declarations of Institut Bauen und Umwelt (IBU), Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report. April 2013
www.bau-umwelt.de

IBU PCR Part B

IBU PCR Part B: PCR Guidance-Texts for Building-Related Products and Services. From the range of Environmental Product Declarations of Institute Construction and Environment e.V. (IBU). Part B: Requirements on the EPD for Locks and fittings.
www.bau-umwelt.com

ISO 14025

ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

EN 15804

EN 15804: 2012+A1:2014: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

GaBi 6 2013

GaBi 6 2013: Software-System and Database for Life Cycle Engineering. Copyright, TM. Stuttgart, Leinfelden-Echterdingen, 1992-2013.

GaBi 6 2013D

GaBi 6 2013D: Documentation of GaBi 6: Software-System and Database for Life Cycle Engineering. Copyright, TM. Stuttgart, Leinfelden-Echterdingen, 1992-2013. <http://documentation.gabi-software.com/>

ISO 14001

Environmental management systems - Requirements with guidance for use (ISO 14001:2004 + Cor. 1:2009)

UL10B: Standard for Fire Tests of Door Assemblies

NFPA 80: 2013

NFPA 80: 2013: Standard for Fire Doors and Other Opening Protectives.

9. Annex

Results shown below were calculated using TRACI Methodology.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

| PRODUCT STAGE | | | | | CONSTRUCTION PROCESS STAGE | USE STAGE | | | | | | | END OF LIFE STAGE | | | | BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARYS |
|---------------------|-----------|---------------|-------------------------------------|----------|----------------------------|-------------|--------|----------------------------|------------------------------|------------------------|-----------------------|----------------------------|-------------------|------------------|----------|------------------------------------|--|
| Raw material supply | Transport | Manufacturing | Transport from the gate to the site | Assembly | Use | Maintenance | Repair | Replacement ⁽¹⁾ | Refurbishment ⁽¹⁾ | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential | |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D | |
| X | X | X | X | X | MND | MND | MND | MND | MND | X | MND | MND | X | X | X | X | |

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of One K1050 Kick Plate

| Parameter | Parameter | Unit | A1-3 | A4 | A5 | B2 | C2 | C4 | D |
|-----------|--|---------------------------|----------|----------|----------|-----------|----------|----------|-----------|
| GWP | Global warming potential | [kg CO ₂ -Eq.] | 6.57E+00 | 1.17E-01 | 7.04E-01 | -4.92E-02 | 5.18E-02 | 7.28E-02 | -1.94E+00 |
| ODP | Depletion potential of the stratospheric ozone layer | [kg CFC11-Eq.] | 4.45E-10 | 5.94E-13 | 3.40E-12 | 1.90E-12 | 2.64E-13 | 2.33E-13 | -1.87E-10 |
| AP | Acidification potential of land and water | [kg SO ₂ -Eq.] | 4.36E-02 | 6.98E-04 | 1.95E-04 | 1.48E-03 | 3.10E-04 | 2.17E-05 | -1.42E-02 |
| EP | Eutrophication potential | [kg N-eq.] | 2.46E-03 | 4.93E-05 | 1.11E-05 | 1.17E-03 | 2.19E-05 | 6.63E-07 | -3.28E-04 |
| Smog | Ground-level smog formation potential | [kg O ₃ -eq.] | 4.47E-01 | 1.44E-02 | 4.47E-03 | 6.39E-03 | 6.38E-03 | 1.71E-04 | -1.21E-01 |
| Resources | Resources | [MJ] | 6.49E+00 | 2.31E-01 | 2.33E-02 | 2.00E-01 | 1.03E-01 | 3.17E-03 | -2.53E+00 |

RESULTS OF THE LCA - RESOURCE USE: One piece of One K1050 Kick Plate

| Parameter | Parameter | Unit | A1-3 | A4 | A5 | B2 | C2 | C4 | D |
|-----------|--|-------------------|----------|----------|----------|----------|----------|----------|-----------|
| PERE | Renewable primary energy as energy carrier | [MJ] | 2.00E+01 | - | - | - | - | - | - |
| PERM | Renewable primary energy resources as material utilization | [MJ] | 0.00E+00 | - | - | - | - | - | - |
| PERT | Total use of renewable primary energy resources | [MJ] | 2.00E+01 | 6.34E-02 | 1.85E-02 | 3.07E+00 | 2.82E-02 | 2.26E-03 | -2.88E+00 |
| PENRE | Non renewable primary energy as energy carrier | [MJ] | 9.43E+01 | - | - | - | - | - | - |
| PENRM | Non renewable primary energy as material utilization | [MJ] | 0.00E+00 | - | - | - | - | - | - |
| PENRT | Total use of non renewable primary energy resources | [MJ] | 9.43E+01 | 1.61E+00 | 2.33E-01 | 1.63E+00 | 7.17E-01 | 3.42E-02 | -2.78E+01 |
| SM | Use of secondary material | [kg] | 1.51E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | Use of renewable secondary fuels | [MJ] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | Use of non renewable secondary fuels | [MJ] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | Use of net fresh water | [m ³] | 4.71E-02 | 4.48E-05 | 2.04E-03 | 1.67E-03 | 1.99E-05 | 1.78E-04 | -1.53E-02 |

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of One K1050 Kick Plate

| Parameter | Parameter | Unit | A1-3 | A4 | A5 | B2 | C2 | C4 | D |
|-----------|-------------------------------|------|----------|----------|----------|----------|----------|----------|-----------|
| HWD | Hazardous waste disposed | [kg] | 6.36E-03 | 3.68E-06 | 1.61E-05 | 9.62E-05 | 1.63E-06 | 2.39E-06 | -2.38E-03 |
| NHWD | Non hazardous waste disposed | [kg] | 1.61E+00 | 2.03E-04 | 1.88E-02 | 1.28E-02 | 9.02E-05 | 6.78E-03 | -6.80E-01 |
| RWD | Radioactive waste disposed | [kg] | 3.55E-03 | 2.11E-06 | 1.35E-05 | 3.67E-05 | 9.39E-07 | 1.36E-06 | -1.32E-03 |
| CRU | Components for re-use | [kg] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | - |
| MFR | Materials for recycling | [kg] | 0.00E+00 | 0.00E+00 | 4.85E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | - |
| MER | Materials for energy recovery | [kg] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | - |
| EEE | Exported electrical energy | [MJ] | 0.00E+00 | 0.00E+00 | 9.01E-01 | 0.00E+00 | 0.00E+00 | 1.39E-01 | - |
| EET | Exported thermal energy | [MJ] | 0.00E+00 | 0.00E+00 | 2.54E+00 | 0.00E+00 | 0.00E+00 | 3.82E-01 | - |

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