ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Intact
HAGAB INDUSTRI AB

EPD HUB, HUB-2248

Publishing date 22 November 2024, last updated on 22 November 2024, valid until 22 November 2029.

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GENERAL INFORMATION

Manufacturer	
Manufacturer	Hagab Industri AB
Address	Industrivägen 5 Taberg, Sweden
Contact details	info@hagab.com
Website	https://hagab.com/

EPD standards, scope and verification	
Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.1, 5 Dec 2023 NPCR 030 version 1.1:2021 Part B for ventilation components
Sector	Manufactured product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Petter Ydrestrand, HAGAB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

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

Product	
Product name	Intact
Additional labels	Intact-R, Intact-D, Intact-UNO
Product reference	-
Place of production	Taberg, Sweden
Period for data	Calendar year 2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	-

Environmental data summary	
Declared unit	1 Kg Intact
Declared unit mass	1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,82E+00
GWP-total, A1-A3 ($kgCO_2e$)	2,32E+00
Secondary material, inputs (%)	1.26
Secondary material, outputs (%)	32.8
Total energy use, A1-A3 (kWh)	14.6
Total water use, A1-A3 (m^3e)	0.06

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

HAGAB is one of Sweden´s leading companies that develop, manufacture and sell advanced fire protection and ventilation solutions. Since 1985, HAGAB has made everyday life easier and safer for our customers.

PRODUCT DESCRIPTION

INTACT is a fire damper that effectively closes the airflow and keeps the seal between fire cells for 60 minutes. It protects against the spread of fire and smoke gas and is approved for installation against a building element or a separate fire-rated wall. The thickness of the damper blade provides a low pressure drop, and with regulating actuators, INTACT allows good regulation of the airflow. The damper comes with a factory-fitted safety actuator with a thermal sensor. The actuator can handle 24V or 230V current.

This EPD is made from Intact 125 mm. In the annex to this EPD, a scaling table is provided to reflect the GWP impacts for the range of products produced in the same plant.

Further information can be found at www.hagab.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	53,6	Europe
Minerals	35,9	Europe
Fossil materials	10,5	Europe/Asia
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0,1387

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 Kg Intact
Mass per declared unit	1 kg
Functional unit	1 Kg Intact installed for 25 years
Reference service life	25 years

SUBSTANCES, REACH - VERY HIGH CONCERN

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

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PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

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

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

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

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production, packaging materials, and other ancillary materials. The raw materials consist of coated steel, gypsum slurry, rubber, and plastic, which are details bought from suppliers in Sweden and Europe from different distances, where a Euro 5 lorry is assumed. Also, this stage includes the fuels used by machines and the handling of waste formed in the preparatory production processes at the manufacturing facilities.

Our manufacturing processes include punching and bending sheet metal, casting of gypsum, and assembly. All the electricity and heating used for these processes are accounted for based on revenue data. A scrap factor of 20% is taken for punching metal sheets and the gypsum casting process. The manufacturing waste is 100% recycled due to close collaboration with local waste process companies and 50 km with Euro 5 lorry is assumed for the transport. The finished product is placed in a suitable cardboard and delivered on a EUR wooden pallet, assumed 32 at a time

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurring from final product delivery to the construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. An average sending distance of 300 km by a Euro 5 lorry is assumed according to NPCR 030:2021.

The product is assumed to be installed by hand with help from electrical tools; therefore, no further fuel consumption is accounted for. A5 involves waste treatment of packaging where 75% of the cardboard is assumed to be recycled based on European data on recycling targets[1]. 25% of the Cardboard and 100% of the pallets are incinerated for energy recovery[2]. A transport distance of 50 km by Euro 5 lorry is assumed.

PRODUCT USE AND MAINTENANCE (B1-B7)

The environmental impact of the use phase (B6) for this product is accounted for by assuming 1 open/close cycle every 48 hours for 25 years of service with specific electrical consumption for the active and passive phases of the actuator. All other phases are not relevant to this specific application. Further, air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

The modelled scenario for EOL is based on recycling, incarnation and landfill. C1 covers the energy used for deconstructing the product where low-voltage electric construction equipment is assumed to be involved. C2 involves the transportation of waste which is assumed to be 50 km with a Euro 5 lorry.

C3 covers the sorting and pressing of iron scrap, the handling of gypsum for recycling and the incarnation of plastic and rubber.

C4 includes the waste disposal processes where materials are sent to landfill. The respective EOL scenarios can be seen in the table below (table 1) which are based on national and EU statistics[3]

1 https://data.europa.eu/en/publications/datastories/open-data-track-progress-eus-recycling-targets

2 EuroPal (2023) & Eurostat & PSR-0014 v2 (2023)

3 https://data.europa.eu/en/publications/datastories/open-data-track-progress-eus-recycling-targets

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Table 1, EOL scenarios.

Scenario	Steel	Gypsum	Plastic/rubber	Electronics
Recycled	39%	10%	0%	0%
Incineration	0%	0%	90%	65%
Landfill	61%	90%	10%	35%

D includes the loads and benefits of recycling the steel and gypsum, involving no virgin production of steel and gypsum. Exported and thermal energy from plastic and rubber incarnation is taken care of.

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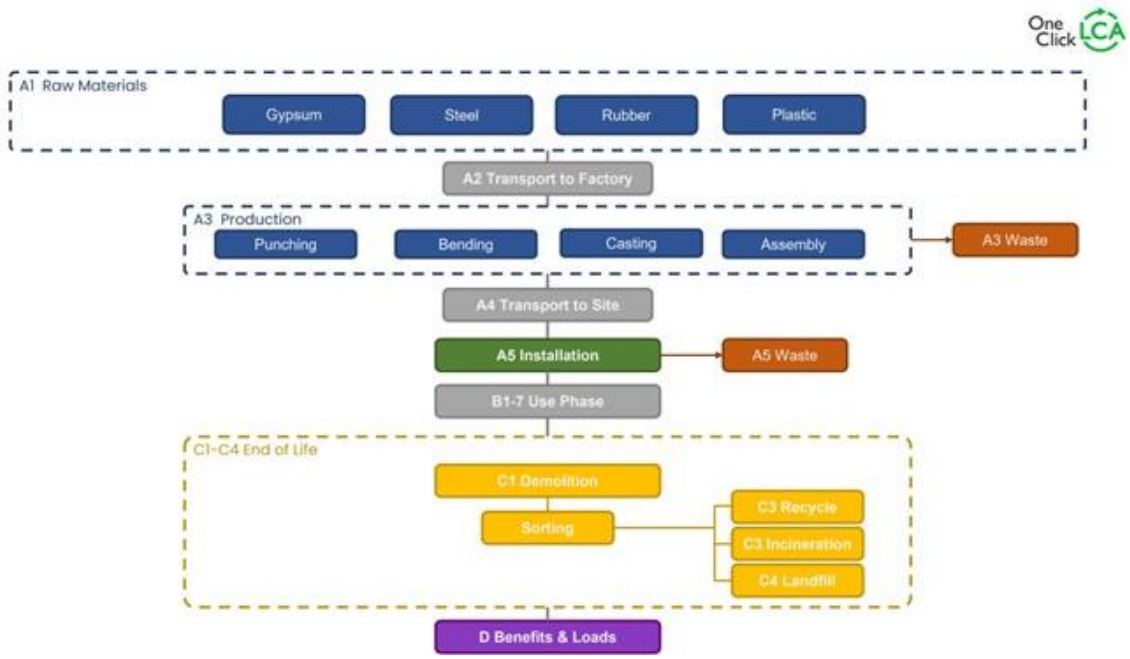
LIFE CYCLE DIAGRAM



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw materials and energy consumption. All inputs and outputs of the unit processes, for which data is available, are included in the calculation.

There is no neglected unit process more than 1% of total mass or energy flows. The module-specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

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

Data type	Allocation
Raw materials	Allocated by mass or volume
Packaging materials	Allocated by mass or volume
Ancillary materials	Allocated by revenue
Manufacturing energy and waste	Allocated by revenue

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	- %

This EPD is product and factory-specific and does not contain average calculations. A scaling table in Appendix A is used to translate the results of this EPD to the different sizes manufactured at the single HAGAB factory.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

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CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	2,45E+00	1,15E-01	-2,44E-01	2,32E+00	6,73E-02	5,17E-01	MND	MND	MND	MND	MND	1,87E+00	MND	6,23E-04	8,25E-03	2,87E-01	7,65E-03	-4,78E-01
GWP – fossil	kg CO_2e	2,45E+00	1,15E-01	2,63E-01	2,82E+00	6,73E-02	8,91E-03	MND	MND	MND	MND	MND	1,74E+00	MND	5,80E-04	8,24E-03	2,87E-01	7,65E-03	-4,78E-01
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-5,08E-01	-5,08E-01	0,00E+00	5,08E-01	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,81E-04
GWP – LULUC	kg CO_2e	1,68E-03	4,49E-05	1,22E-03	2,94E-03	2,64E-05	5,07E-05	MND	MND	MND	MND	MND	1,29E-01	MND	4,31E-05	3,24E-06	7,62E-06	6,07E-06	-3,82E-04
Ozone depletion pot.	kg CFC_{-11}e	1,04E-07	2,66E-08	3,74E-08	1,68E-07	1,56E-08	9,66E-10	MND	MND	MND	MND	MND	8,09E-08	MND	2,70E-11	1,91E-09	1,03E-09	1,81E-09	-2,07E-08
Acidification potential	mol H^+e	3,51E-02	4,68E-04	1,84E-03	3,74E-02	2,73E-04	4,67E-05	MND	MND	MND	MND	MND	8,80E-03	MND	2,94E-06	3,35E-05	1,30E-04	1,04E-02	-2,57E-03
EP-freshwater[2)]	kg Pe	1,04E-04	8,17E-07	1,40E-05	1,19E-04	4,72E-07	3,07E-07	MND	MND	MND	MND	MND	8,18E-05	MND	2,73E-08	5,79E-08	3,08E-07	1,23E-07	-1,95E-05
EP-marine	kg Ne	3,50E-03	1,40E-04	6,41E-04	4,28E-03	8,16E-05	1,33E-05	MND	MND	MND	MND	MND	1,98E-03	MND	6,60E-07	9,99E-06	4,94E-05	2,00E-05	-4,20E-04
EP-terrestrial	mol Ne	1,11E-01	1,54E-03	4,78E-03	1,18E-01	8,99E-04	1,40E-04	MND	MND	MND	MND	MND	2,46E-02	MND	8,21E-06	1,10E-04	5,14E-04	1,84E-04	-4,90E-03
POCP ("smog")[3)]	kg NMVOCe	9,44E-03	4,73E-04	1,21E-03	1,11E-02	2,75E-04	3,97E-05	MND	MND	MND	MND	MND	5,62E-03	MND	1,88E-06	3,37E-05	1,28E-04	6,96E-04	-2,11E-03
ADP-minerals & metals[4)]	kg Sbe	2,80E-03	3,96E-07	2,66E-06	2,80E-03	2,38E-07	7,11E-08	MND	MND	MND	MND	MND	3,26E-05	MND	1,09E-08	2,92E-08	6,25E-07	1,82E-08	-7,52E-06
ADP-fossil resources	MJ	3,11E+01	1,71E+00	1,59E+01	4,87E+01	9,99E-01	1,88E-01	MND	MND	MND	MND	MND	2,49E+02	MND	8,30E-02	1,22E-01	1,13E-01	1,40E-01	-4,79E+00
Water use[5)]	m^3e depr.	2,08E+00	7,87E-03	1,45E+00	3,54E+00	4,62E-03	7,47E-03	MND	MND	MND	MND	MND	9,50E+00	MND	3,17E-03	5,66E-04	8,21E-03	8,95E-04	-9,25E-02

1) GWP = Global Warming Potential.

2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e.

3) POCP = Photochemical ozone formation.

4) ADP = Abiotic depletion potential.

5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

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ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	2,74E-07	1,02E-08	2,28E-08	3,07E-07	5,81E-09	1,44E-09	MND	MND	MND	MND	MND	1,29E-07	MND	4,31E-11	7,11E-10	1,33E-09	8,79E-09	-3,40E-08
Ionizing radiation[6]	kBq U235e	1,04E-01	8,87E-03	6,41E-01	7,54E-01	5,23E-03	7,22E-03	MND	MND	MND	MND	MND	1,79E+01	MND	5,96E-03	6,41E-04	7,87E-04	8,08E-04	-3,27E-02
Ecotoxicity (freshwater)	CTUe	1,16E+02	1,43E+00	8,94E+00	1,26E+02	8,28E-01	7,10E-01	MND	MND	MND	MND	MND	8,76E+01	MND	2,92E-02	1,02E-01	1,97E+00	2,17E+00	-1,57E+01
Human toxicity, cancer	CTUh	8,21E-09	4,33E-11	4,87E-10	8,74E-09	2,57E-11	1,73E-11	MND	MND	MND	MND	MND	2,27E-09	MND	7,56E-13	3,14E-12	4,88E-11	1,16E-11	2,77E-09
Human tox. non-cancer	CTUh	1,58E-07	1,44E-09	4,39E-09	1,64E-07	8,41E-10	3,06E-10	MND	MND	MND	MND	MND	4,45E-08	MND	1,48E-11	1,03E-10	7,89E-09	5,31E-10	-9,42E-09
SQP[7]	-	5,80E+00	1,26E+00	2,88E+01	3,59E+01	6,99E-01	7,13E-02	MND	MND	MND	MND	MND	5,63E+01	MND	1,88E-02	8,57E-02	1,39E-01	3,03E-01	-2,37E+00

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

7) SQP = Land use related impacts/soil quality.

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USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8]	MJ	2,09E+00	2,40E-02	4,41E+00	6,52E+00	1,43E-02	4,30E-02	MND	MND	MND	MND	MND	1,03E+02	MND	3,42E-02	1,76E-03	1,20E-02	3,52E-03	-7,32E-01
Renew. PER as material	MJ	7,01E-03	0,00E+00	4,42E+00	4,43E+00	0,00E+00	-4,42E+00	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	-6,31E-03	-7,01E-04	0,00E+00
Total use of renew. PER	MJ	2,09E+00	2,40E-02	8,83E+00	1,09E+01	1,43E-02	-4,38E+00	MND	MND	MND	MND	MND	1,03E+02	MND	3,42E-02	1,76E-03	5,71E-03	2,82E-03	-7,32E-01
Non-re. PER as energy	MJ	2,87E+01	1,71E+00	1,57E+01	4,61E+01	9,99E-01	1,88E-01	MND	MND	MND	MND	MND	2,48E+02	MND	8,26E-02	1,22E-01	1,13E-01	1,40E-01	-4,79E+00
Non-re. PER as material	MJ	2,48E+00	0,00E+00	1,77E-01	2,66E+00	0,00E+00	-1,77E-01	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	-2,23E+00	-2,48E-01	0,00E+00
Total use of non-re. PER	MJ	3,12E+01	1,71E+00	1,59E+01	4,88E+01	9,99E-01	1,09E-02	MND	MND	MND	MND	MND	2,48E+02	MND	8,26E-02	1,22E-01	-2,12E+00	-1,08E-01	-4,79E+00
Secondary materials	kg	1,26E-02	5,64E-04	1,63E-01	1,76E-01	3,35E-04	1,06E-04	MND	MND	MND	MND	MND	1,72E-02	MND	5,73E-06	4,10E-05	1,06E-04	4,12E-05	1,86E-01
Renew. secondary fuels	MJ	1,22E-04	6,18E-06	9,30E-02	9,32E-02	3,69E-06	6,70E-07	MND	MND	MND	MND	MND	5,72E-05	MND	1,91E-08	4,52E-07	4,21E-06	1,38E-06	-3,59E-05
Non-ren. secondary fuels	MJ	8,60E-23	0,00E+00	0,00E+00	8,60E-23	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,30E-02	2,15E-04	1,78E-02	6,10E-02	1,26E-04	1,73E-04	MND	MND	MND	MND	MND	2,39E-01	MND	7,96E-05	1,54E-05	2,12E-04	1,48E-04	-2,23E-03

8) PER = Primary energy resources.

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END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,04E-01	1,94E-03	1,34E-02	2,19E-01	1,12E-03	5,33E-04	MND	MND	MND	MND	MND	1,86E-01	MND	6,19E-05	1,37E-04	4,18E-04	0,00E+00	-1,22E-01
Non-hazardous waste	kg	4,42E+00	3,43E-02	3,44E-01	4,80E+00	1,99E-02	5,25E-02	MND	MND	MND	MND	MND	4,45E+00	MND	1,48E-03	2,44E-03	1,04E-01	6,59E-01	-1,02E+00
Radioactive waste	kg	1,12E-04	1,17E-05	2,49E-04	3,73E-04	6,88E-06	1,86E-06	MND	MND	MND	MND	MND	3,83E-03	MND	1,28E-06	8,43E-07	3,69E-07	0,00E+00	-1,14E-05

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	3,12E-02	0,00E+00	1,40E+00	1,44E+00	0,00E+00	1,17E-01	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	2,42E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,32E-01	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	9,10E-02	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,53E-01	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	2,33E+00	1,14E-01	2,68E-01	2,71E+00	6,66E-02	1,14E-02	MND	MND	MND	MND	MND	1,85E+00	MND	6,16E-04	8,17E-03	2,86E-01	7,21E-03	-4,58E-01
Ozone depletion Pot.	kg $CFC_{11}e$	6,75E-08	2,11E-08	3,12E-08	1,20E-07	1,23E-08	7,93E-10	MND	MND	MND	MND	MND	7,25E-08	MND	2,42E-11	1,51E-09	8,60E-10	1,44E-09	-2,08E-08
Acidification	kg SO_2e	2,14E-02	3,63E-04	1,39E-03	2,32E-02	2,12E-04	3,65E-05	MND	MND	MND	MND	MND	6,78E-03	MND	2,26E-06	2,60E-05	9,67E-05	9,54E-03	-2,13E-03
Eutrophication	kg $PO_4^{3}e$	5,88E-03	8,25E-05	6,86E-04	6,65E-03	4,81E-05	4,45E-05	MND	MND	MND	MND	MND	4,06E-03	MND	1,35E-06	5,90E-06	6,14E-05	3,37E-04	-7,75E-04
POCP (“smog”)	kg C_2H_4e	9,26E-04	1,48E-05	8,60E-05	1,03E-03	8,69E-06	3,11E-06	MND	MND	MND	MND	MND	3,55E-04	MND	1,19E-07	1,06E-06	2,48E-06	3,82E-04	-2,34E-04
ADP-elements	kg Sbe	2,77E-03	3,87E-07	2,51E-06	2,78E-03	2,33E-07	6,96E-08	MND	MND	MND	MND	MND	3,29E-05	MND	1,10E-08	2,86E-08	6,21E-07	1,75E-08	-6,44E-06
ADP-fossil	MJ	3,10E+01	1,71E+00	1,59E+01	4,86E+01	9,99E-01	1,88E-01	MND	MND	MND	MND	MND	2,48E+02	MND	8,26E-02	1,22E-01	1,13E-01	1,40E-01	-4,79E+00

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

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

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

Why does verification transparency matter? Read more online

This EPD has been generated by One Click LCA EPD genera- tor, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

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

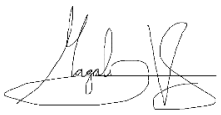
I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

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

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

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

22.11.2024



ENVIRONMENTAL PRODUCT DECLARATION

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APPENDIX A: PRODUCT VARIATIONS

As mentioned in earlier sections, table 2 in this appendix can be used to convert the results of the LCA presented in this EPD to all the sizes and configurations of Intact that are available at HAGAB. The environmental impact for each unique article can thus be calculated by multiplying the results presented in this EPD by the weight of the specific article.

Table 2, Scaling table.

Article Number	Size Ød [mm]	Length [mm]	Weight [kg]	GWP-fossil [kgCO_2e]	GWP-Total [kgCO_2e]
INT201012, INT201017, INT201013, INT201012D, INT201012UNO	100	170	3,98	11,22	9,23
INT201212, INT201217, INT201213, INT201212D, INT201212UNO	125	170	4,04	11,39	9,37
INT201612, INT201617, INT201613, INT201612D, INT201612UNO	160	170	5,08	14,33	11,79
INT202012, INT202017, INT202013, INT202012D, INT202012UNO	200	170	6,16	17,37	14,29
INT202512, INT202517, INT202513, INT202512D, INT202512UNO	250	204	7,66	21,60	17,77
INT203112, INT203117, INT203113, INT203112D, INT203112UNO	315	204	9,23	26,03	24,41
INT204012, INT204017, INT204013, INT204012D, INT204012UNO	400	220	14,40	40,61	33,41
INT205012, INT205017, INT205013, INT205012D, INT205012UNO	500	230	18,00	50,76	41,76
INT206312, INT206317, INT206313, INT206312D, INT206312UNO	630	230	25,40	71,63	58,93

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