



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH ISO 14025:2006 AND EN 15804:2012+A2:2019/AC:2021



Knauf Internal Metal Partition Components

Declaration Number: SP-10363

Issued on: 2023-11-06

Valid until: 2028-11-05

Programme: The International EPD® System

Programme operator: EPD International AB

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com.

This is an EPD of multiple products, based on the average results of the product group.

This Environmental Product Declaration has been verified by an independent third party.

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INTRODUCTION

This EPD provides environmental performance indicators for Knauf internal metal partition components. This is a cradle-to-gate EPD with modules A4, C1-C4 & D EPD in accordance with the requirements of EN 15804.

The EPD is based on a life cycle assessment (LCA) study which used production data for year 2022 from manufacturing facilities in Wellingborough, UK. Background data were taken from the ecoinvent database (v3.8).

The EPD presents details of the LCA, a description of the product life cycle it covers, values for the environmental indicators specified by EN 15804 and a brief explanation of those results.



Programme:
The International EPD® System

Programme operator:
EPD International AB

Programme Information

EPD programme	The International EPD® System
EPD programme operator	EPD International AB - Box 210 60 - SE 100 31 Stockholm - Sweden www.environdec.com - info@environdec.com
Accountabilities for PCR, LCA and independent, third-party verification	
EPD based on product category rules	The CEN standard EN 15804 serves as the core PCR The International EPD® System's PCR 2019:14 Construction products (EN 15804:A2) V1.3.1 2023-07-08
PCR review conducted by	The Technical Committee of the International EPD® System contact via info@environdec.com
LCA conducted by	EuGeos Limited, UK - www.eugeos.co.uk
LCA software	openLCA
Background database	ecoinvent V3.8
EPD verification	Independent verification of this EPD and data, according to ISO 14025:2006: <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier	Ugo Pretato, Studio Fieschi & soci (Italy) - Recognized Individual Verifier
Approved by	The International EPD® System
Procedure for data follow-up during EPD validity	Involves third party Verifier: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Declaration No	S-P-10363
Date of publication	2023-11-06
EPD valid until	2028-11-05

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison.

For further information about comparability, see EN 15804 and ISO 14025.

KNAUF

Founded in 1932, Knauf began as a family company and over the years has grown into a global enterprise spanning 90 countries, incorporating multiple brands, and delivering world class construction materials and solutions via 40,000 employees worldwide. Knauf is one of the world's leading manufacturers of building products.

Knauf UK and Ireland began in 1988 when the Knauf Group built a plasterboard factory in Sittingbourne, Kent. The production system, which was engineered and designed using the most modern manufacturing technologies, enables the production of a wide range of superior quality standard and high-performance plasterboards and insulating laminates.

Following the success of the Sittingbourne Plant, construction on a second UK Plasterboard manufacturing facility commenced in 1990. The Immingham Plasterboard Plant was built to the same modern technical specification and has the capability to produce the complete range of Knauf plasterboards, thermal laminates and foil-backed plasterboards.

In 1993 the Sittingbourne facility added the UK Powder Plant which produces a comprehensive range of products including Knauf Plasterboard Adhesive.

To increase capacity, the Immingham plant was extended in 2006. The latest energy management technology was incorporated, the whole plant insulated, and two huge heat exchangers added, saving 10% of the plant's energy requirements.

In 2013 Knauf opened a striking modernist-inspired building known as The Cube, an innovative training, visitor and administrative centre at the Sittingbourne site.

Expansion in the UK continues and in 2022 Knauf reached an agreement with Gypfor for the purchase of a new plasterboard manufacturing plant in Newport, South Wales. This multi-million pound investment will increase the UK production volume of Knauf's range of gypsum-based building materials by 20% when fully onstream in the near future. It is an emphatic demonstration of our commitment to dry construction in the UK and Ireland markets.

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PRODUCT INFORMATION

This EPD applies to Knauf internal metal partition components produced at Wellingborough, UK, using raw materials sourced from the global steel supply chain.

Product Description

Knauf internal metal partition components are made from galvanised lightweight steel sections, for use in non-loadbearing Knauf partition and ceiling systems.

These are essential components for creating partition systems to achieve a wide range of performance criteria and varying partition heights when designed as part of a full system with Knauf plasterboard, Knauf accessories and insulation products.

The range encompasses Knauf 'C', 'I' and 'MW' studs; Knauf 'U' and Deep flange 'U'channels; Knauf bar; Knauf acoustic 'C' stud and Knauf 'C-T' stud and 'J' channel used in the Knauf Shaftwall system.

This range includes Knauf's MF ceiling system components, MF Ceiling Channel, MF Perimeter Channel, MF Primary Support Channel, C Form Ceiling C Channel, C Form Universal Bracket.

Knauf Metal Studs:

- Knauf C Stud
- Knauf Acoustic C Stud
- Knauf I Stud
- Knauf MW Stud
- Knauf CT Stud

Knauf Metal Channels:

- Knauf U Channel
- Knauf Deep Flange U Channel
- Knauf J Channel

Ceiling Profiles

- MF Ceiling Channel
- MF Perimeter Channel
- MF Primary Support Channel
- C Form Ceiling C Channel
- C Form Intersection Connector
- C Form Universal Bracket



Knauf internal metal partition components are classified CPC 4126 under the UN CPC classification system v2.1.

TECHNICAL DATA

Knauf internal metal partition components are made from hot-dip galvanised steel which conforms to the BS EN 10346:2015 standard.

MANUFACTURING

Wide coils of hot-dip galvanised steel are cut to width; the sections of the different finished products are then formed by cold rolling. Holes are punched before or after the rolling process. The finished profile is cut to length and product information such as product codes, manufacturing date and CE marks are applied by in-line printers.

PACKAGING & TRANSPORTATION

The finished products are transported by road for storage until they are despatched to customers.

Products are packed in bundles of ten using filament tape. For transit, these bundles are strapped together with high-tensile strapping and metal seals; timber battens are used to separate the bundles.

INSTALLATION

Knauf internal metal partition components constitute the framework for partitions, wall linings and ceilings built using gypsum wallboards. Installation should follow manufacturers' instructions.

PRODUCT USE AND MAINTENANCE

After installation, the products are normally concealed and inaccessible. In normal use, neither maintenance nor repair is either required or possible. The product is sufficiently durable to remain in place for the lifetime of a building.

END-OF-LIFE

When the partition is dismantled, metal framing components should be segregated for recycling with other ferrous metals; European Waste Catalogue (EWC) code 17 04 05 applies.

CONTENT INFORMATION

The material composition of Knauf internal metal partition components - including delivery packaging - is shown below:

Components/ Materials	Weight (kg)	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Steel	0.96 - 0.98	10	0
Zinc	0.02 - 0.04	assumed 0	0
TOTAL	1	10	0
Packaging	Weight (kg)	Weight-% (versus the product)	Weight biogenic material, kg C/kg
Plastics (PP, PET)	<0.001	<0.1	assumed 0
Steel & other metals	<0.001	<0.1	0
Wood	0.01	1	0.5
TOTAL	0.01	1	n/a

No substance included in the Candidate List of Substances of Very High Concern for authorization under the REACH Regulations is present in the protection materials, either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).

RESIDUAL RISKS AND EMERGENCIES

There are no residual risks associated with the normal day-to-day use of Knauf internal metal partition components.

Care must be taken to select the materials in accordance with their declared properties and any other associated regulations governing their usage.

FURTHER PRODUCT INFORMATION

Detailed product information and datasheets can be found

website

<https://www.knauf.co.uk/contact-us>

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LCA INFORMATION

This section of the EPD records key features of the LCA on which it is based; the LCA was carried out by EuGeos using openLCA software.

Functional/Declared Unit

The declared unit is 1kg of Knauf internal metal partition component.

Scope

This EPD covers the production stage (modules A1-A3), transport to site (A4) and end-of-life management (C & D) - see below; as permitted by EN 15804, modules A1-A3 are declared in aggregated form.

Module D provides an estimate of the potential benefits that would accrue to a different product system were the product constituents and recycled wastes identified in data for other life cycle modules actually recycled or recovered at current rates and using current technologies.

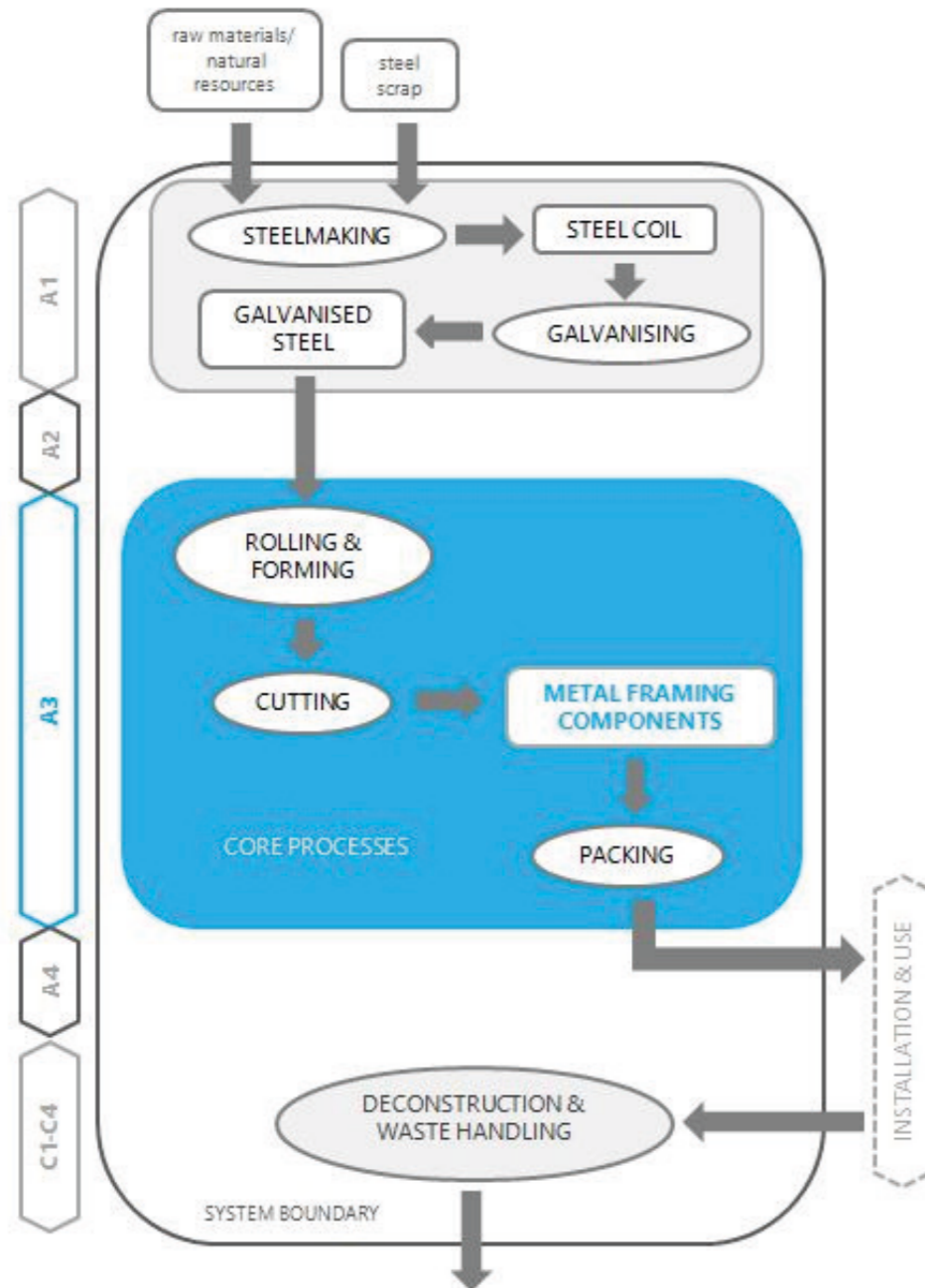
Product stage	Construction process stage	Use stage										End of life stage			Benefits & loads beyond the system boundaries		
		Raw material supply	Transport	Manufacturing	Transport to	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition		Transport	Water treatment
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
Modules declared X included in LCA – ND: module not declared – NR: module not relevant																	
X	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X	
Geography																	
GL	GL	GB	GB	-	-	-	-	-	-	-	-	GB	GB	GB	GB	GB	
Specific data used																	
>90%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Variation – products																	
<10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Variation – sites																	
0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

SYSTEM BOUNDARIES

The system boundary of the EPD is defined using the modular approach set out in EN 15804.

As well as the core processes which cover final product manufacture at Wellingborough, the system includes production of all raw materials and components from basic resources; transport of those materials at all stages up to users' sites, subsequent installation and end-of-life management; the production of fuels and energy carriers and their delivery to manufacturing sites; the treatment of all wastes.

The product life cycle covered by this EPD is illustrated below:



CUT-OFF CRITERIA

The collected data encompassed all raw materials used for the metal partition components, packaging materials and process aids, as well as associated transport to the manufacturing site.

Process energy and direct production wastes are included within the data. There is no process water use, nor are there any emissions to air or water from the manufacturing factory.

According to EN 15804 and the PCR, flows can be omitted (cut off) from a core process in the LCA up to a maximum of 1% of the total mass of material inputs or 1% of the total energy content of fuels and energy carriers; some ancillary materials used in small quantities within the process and amounting, in combination, to <0.5% of total input materials were omitted from the LCA underpinning this EPD.

Stockholder operations (storage and slitting of wide steel coils) are omitted from the LCA; neither public-domain information nor generic data are available to include them reliably. Short-term storage is also omitted.

DATA SOURCES AND DATA QUALITY

PRIMARY DATA

Data characterising core processes (see above figure) were collected for a continuous 12-month period between 2022/01/01 and 2022/12/31. The data have therefore been updated within the last 5 years.

These data were checked to ensure that sufficient materials and water are included within the inputs to account for all products, wastes and emissions.

BACKGROUND DATA

Background (generic) data were taken from the ecoinvent database (v3.8); this fulfils the EN 15804 requirement that generic data used in the LCA have been updated within the last 10 years.

The quality of generic data has been reviewed; where necessary, data in the core ecoinvent database has been adjusted to better reflect the information provided about Knauf's specific supply chain.

ALLOCATION

In the background data, the ecoinvent default allocation is applied to all processes except those in which secondary materials are used, where the "cut-off" allocation is applied. This ensures that secondary materials are free of upstream burdens that arise prior to their reaching the "end of waste" state, in accordance with Section 6.3.4.2 of EN 15804.

The burdens of final manufacture are allocated across all products of the group on a mass basis. The zinc coating thickness is the same for all products although they are of different steel gauges; the zinc coating considered in the LCA is a production-weighted average.

ASSUMPTIONS AND ESTIMATES

Inputs to and outputs from the system are accounted for over a 100-year time period; long-term emissions are therefore omitted from the impact assessment part of the LCA, except for biogenic carbon-containing flows, which are accounted for on an indefinite timeframe.

In the LCA, post-consumer recycled content of steel is assumed to be 10%: all steelmaking uses some scrap, with 10% reported as a typical minimum in worldsteel's life cycle inventory methodology report for steel products (2017). In the absence of specific information regarding the actual steels used, recycled content is reported as zero in the content declaration of this EPD, as required by the PCR.

The "primary energy used as material" indicators (PERM; PENRM) are calculated using - as characterisation factors - published values for constituent materials which can yield energy on combustion, where available, and from published calorific values where PE(N) RM values are not available. In this study Calculations of PERM are based on NCV of 14MJ/kg for wood (in packaging - which accounts for <1% of the declared unit). "Primary energy as fuel" indicators (PENRE, PERE) are calculated as the total primary energy demand minus primary energy used as material.

SCENARIOS

Transport to customers, waste processing, waste treatment and final disposal are modelled using scenarios.

MODULE A4

Scenario Parameters – transport module A4	
Parameter	Quantity & unit (per declared unit)
Vehicle type	lorry
Fuel type and consumption	diesel, 0.3l/km
Capacity utilisation (including empty returns)	38% / 16t average load
Distance travelled	300km road
Bulk density of transported products	7800kgm ⁻³

MODULE C

Removal from site (Module C1) is assumed to be a manual operation, without identifiable energy or material inputs. No components for reuse are generated and all outputs are treated within the system boundary (in Module C3 or C4). Therefore no potential environmental impacts associated with this module are reported.

Transport of waste product to the waste treatment facility (Module C2) is modelled using a scenario.

Scenario parameters – transport module C2	
Parameter	Quantity & unit (per declared unit)
Vehicle type	lorry
Fuel type and consumption	diesel, 0.1l/km
Capacity utilisation (including empty returns)	33% / 6t average load
Distance travelled	50km road
Bulk density of transported products	7800kgm ⁻³

Final disposal (module C4) assumes that 95% of metal partition components are recycled, and that the remainder is sent to landfill.

SCENARIOS

MODULE D

The benefits reported in Module D are calculated for net flows of materials across the system boundary (materials to be recycled or recovered leaving the modelled system from the end-of-life stage minus recycled materials content of the product), as detailed in the table below; any recycling of wooden packaging is omitted.

Module D calculations exclude any recycling of packaging or process wastes arising in Module A1 – A3.

Scenario parameters: Module D					
Output to recycling / recovery	Assumed fate	Displaced input flow	Quality factor	Net output	
				Quantity	Units
Ferrous metals	recycling	converter steel production - electric arc furnace operation	1	0.85	kg

ENVIRONMENTAL INDICATORS

This EPD contains environmental information about Knauf internal metal partition components in the form of quantitative indicator values for a number of parameters, which encompass calculated environmental impact potentials, resource and energy use, waste generation and material and energy outputs from the product system that may be reused, recycled or recovered into other, unspecified product life cycles.

Environmental impact potentials are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Environmental indicator results for all declared modules are shown in tables on the following pages for the declared unit of 1kg of Knauf internal metal partition components; the A1 - A3 modules are shown on an aggregated basis as mandated by PCR 2019:14 §5.4.5.; the results of modules A1-A3 should not be used without considering the results of module C.

INTERPRETATION OF THE LCA RESULTS

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

Indicator values obtained for resource depletion (ADPMM, ADPFF), stratospheric ozone depletion (ODP) and water deprivation (WDP) potential should be used with caution; all are subject to uncertainties in data or method which limit the scope for their use as the basis for comparisons.

In LCA of finished steel products, upstream activities contribute strongly to the environmental indicator values obtained. Evaluation of the available data representing these activities identified various sources of uncertainty which influence the indicator values reported in this EPD. The uncertainty in those indicator values is considered to be at least +/-10% for the climate change category, and is likely higher for other categories.

No untreated wastes leave the modelled system, which includes waste treatment activities as required by EN 15804. The waste indicators HWD, NHWD and TRWD presented in this EPD therefore represent waste flows within the modelled system.

KNAUF INTERNAL METAL PARTITION COMPONENTS

ENVIRONMENTAL IMPACTS EN 15804 + A2		Unit	A1 - A3	A4	C1	C2	C3	C4	D
Climate change – GWP fossil	GWP-fossil	kg CO ₂ eq	3.35E+00	4.98E-02	0.00E+00	1.07E-02	2.11E-02	1.30E-04	-1.24E+00
Climate change – GWP biogenic	GWP-biogenic	kg CO ₂ eq	4.90E-03	4.49E-05	0.00E+00	1.03E-05	-5.60E-04	5.40E-03	3.30E-03
Climate change – GWP land transformation	GWP-luluc	kg CO ₂ eq	2.20E-03	1.93E-05	0.00E+00	4.98E-06	2.36E-05	1.38E-08	-6.70E-04
Climate change – GWP total	GWP-total	kg CO ₂ eq	3.35E+00	4.99E-02	0.00E+00	1.07E-02	2.05E-02	5.53E-03	-1.24E+00
Ozone depletion	ODP	kg CFC-11 eq	1.94E-07	1.15E-08	0.00E+00	2.41E-09	2.72E-09	2.67E-11	-5.55E-08
Acidification potential	AP	mol H+ eq	2.17E-02	2.00E-04	0.00E+00	4.26E-05	2.70E-04	1.34E-06	-5.52E-03
Eutrophication – freshwater	EP-freshwater	kg P eq	2.36E-03	3.21E-06	0.00E+00	8.04E-07	1.21E-05	6.94E-09	-5.20E-04
Eutrophication – marine	EP-marine	kg N eq	4.47E-03	6.09E-05	0.00E+00	1.24E-05	5.89E-05	5.75E-07	-1.39E-03
Eutrophication – terrestrial	EP-terrestrial	mol N eq	4.82E-02	6.70E-04	0.00E+00	1.40E-04	6.70E-04	6.30E-06	-1.29E-02
Photochemical ozone formation	POFP	kg NMVOC eq	1.84E-02	2.00E-04	0.00E+00	4.16E-05	1.80E-04	1.76E-06	-6.28E-03
Depletion of abiotic resources – minerals & metals *	ADPMM	kg Sb eq	6.34E-05	1.73E-07	0.00E+00	4.87E-08	2.95E-06	6.68E-11	-1.95E-05
Depletion of abiotic resources – fossil fuels *	ADPFF	MJ, ncv	5.41E+01	7.70E-01	0.00E+00	1.64E-01	3.25E-01	1.84E-03	-1.64E+01
Water (user) deprivation potential *	WDP	m ³ world-eq deprived	1.80E+00	3.39E-03	0.00E+00	8.10E-04	4.91E-03	4.33E-06	-2.23E-01
ENVIRONMENTAL IMPACT (ADDITIONAL)		Unit	A1 - A3	A4	C1	C2	C3	C4	D
Climate change - GWP-GHG **	GWP-GHG	kg CO ₂ eq	3.36E+00	4.98E-02	0.00E+00	1.07E-02	2.11E-02	1.30E-04	-1.24E+00

* The results of this environmental impact indicator shall be used with care because either the uncertainties associated with the results are high or there is limited experience with the indicator.

** GWP-GHG includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

KNAUF INTERNAL METAL PARTITION COMPONENTS

RESOURCE USE		Unit	A1 - A3	A4	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	PERE	MJ	2.50E+00	1.06E-02	0.00E+00	2.70E-03	5.30E-02	1.46E-05	-7.43E-01
Renewable primary energy resources as material utilisation	PERM	MJ	1.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total renewable primary energy use	PERT	MJ	2.66E+00	1.06E-02	0.00E+00	2.70E-03	5.30E-02	1.46E-05	-7.43E-01
Non-renewable primary energy as energy carrier	PENRE	MJ	5.41E+01	7.70E-01	0.00E+00	1.64E-01	3.25E-01	1.84E-03	-1.64E+01
Non-renewable primary energy resources as material utilisation	PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total non-renewable primary energy use	PENRT	MJ	5.41E+01	7.70E-01	0.00E+00	1.64E-01	3.25E-01	1.84E-03	-1.64E+01
Use of secondary material	SM	kg	2.76E-01	0.00E+00	0.00E+00	0.00E+00	2.91E-03	0.00E+00	6.56E-01
Use of renewable secondary fuels	RSF	MJ	1.22E-02	2.30E-04	0.00E+00	5.99E-05	0.00E+00	1.77E-07	2.31E-02
Use of non-renewable secondary fuels	NRSF	MJ	1.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.37E-02
Net use of fresh water	FW	m ³	4.43E-02	8.59E-05	0.00E+00	2.07E-05	1.20E-04	1.10E-07	-6.31E-03
WASTES		Unit	A1 - A3	A4	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	8.06E+00	1.67E-02	0.00E+00	4.21E-03	8.94E-02	3.38E-05	-2.36E+00
Non-hazardous waste disposed	NHWD	kg	6.83E-01	3.84E-02	0.00E+00	6.70E-03	7.04E-03	1.48E-06	-7.75E-02
Radioactive waste disposed	TRWD	kg	9.60E-04	1.50E-05	0.00E+00	3.58E-06	2.88E-05	2.05E-08	7.00E-04
OUTFLOWS		Unit	A1 - A3	A4	C1	C2	C3	C4	D
Components for re-use	CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	MFR	kg	4.93E-01	0.00E+00	0.00E+00	0.00E+00	9.50E-01	0.00E+00	-1.59E-01
Materials for energy recovery	MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.13E-01
Exported energy - electrical	EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy - thermal	EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

For information, indicator values calculated using the methods prescribed in the earlier version of EN 15804 (EN 15804+A1:2013) are provided in the table below for the declared unit of 1kg of Knauf internal metal partition components; modules A1 - A3 are shown on an aggregated basis.

KNAUF INTERNAL METAL PARTITION COMPONENTS

ENVIRONMENTAL IMPACTS EN 15804 + A1		Unit	A1 - A3	A4	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO2-eq	3.22E+00	4.94E-02	0.00E+00	1.06E-02	2.07E-02	1.30E-04	-1.19E+00
Depletion potential of the stratospheric ozone layer	ODP	kg CFC11-eq	1.94E-07	1.15E-08	0.00E+00	2.41E-09	2.72E-09	2.67E-11	-5.55E-08
Acidification potential of land and water	AP	kg SO2-eq	2.78E-02	1.60E-04	0.00E+00	3.37E-05	2.20E-04	9.65E-07	-4.62E-03
Eutrophication potential	EP	kg PO43-eq	9.24E-03	3.43E-05	0.00E+00	7.51E-06	6.15E-05	2.23E-07	-2.20E-03
Formation potential of tropospheric ozone photochemical oxidants	POCP	kg ethene-eq	1.81E-03	6.42E-06	0.00E+00	1.40E-06	8.06E-06	3.88E-08	-6.70E-04
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb-eq	6.34E-05	1.73E-07	0.00E+00	4.87E-08	2.95E-06	6.68E-11	-1.95E-05
Abiotic depletion potential for fossil resources	ADPF	MJ	5.41E+01	7.70E-01	0.00E+00	1.64E-01	3.25E-01	1.84E-03	-1.64E+01

ADDITIONAL ENVIRONMENTAL INFORMATION

Environmental Accreditations

Environmental and health during manufacture

Knauf, Health and Safety is a core value. The Company's aim is always to be injury-free. A target of zero accidents at work for employees, visitors and contractors is set by the business.

In all aspects of the Company's activities, the Health and Safety rules and relevant regulations must be complied with. In addition, there are a number of definitive Company Safety Procedures and together these determine the minimum standards expected by the Company. In order to achieve this, close co-operation with representatives of the relevant enforcement agencies is ensured. To ensure that the Company's objectives are achieved, documented safety management systems are employed at site and within the central functions. These include a systematic identification of hazards, assessment of the risks and the development of safe systems of work to eliminate or reduce any risks to an acceptable level. Audits and Inspections are used to monitor standards of safety management, adherence to the law and Company procedures. Knauf plants are managed through BES6001, ISO14001, ISO9001 and OHSAS 18001 has now changed to ISO 45001 certified systems.

REFERENCES

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General Program Instructions, V4.0, 2021-03-29 – The International EPD® System - EPD International AB

ISO 9001 – Quality management systems – Requirements

ISO 14001:2015 – Environmental management systems – Requirements with guidance for use

ISO 14025:2009-11 – Environmental labels and declarations – Type III environmental declarations – Principles and procedures

Internal Metal Framework LCA (August 2023) – Report for Knauf UK GmbH- EuGeos Limited

OHSAS 18001/ISO 45001 – Occupational Health and Safety Management

PCR 2019:14 Construction products (EN 15804:A2) V1.3.1 2023-07-08 – The International EPD® System – EPD International AB)

Life cycle inventory methodology report for steel products – worldsteel 2017

GLOSSARY

The International EPD® System: a programme for Type III environmental declarations, maintaining a system to verify and register EPDs as well as keeping a library of EPDs and PCRs in accordance with ISO 14025. (www.environdec.com)

Life cycle assessment (LCA): LCA studies the environmental aspects and quantifies the potential impacts (positive or negative) of a product (or service) throughout its entire life. ISO standards ISO 14040 and ISO 14044 set out conventions for conducting LCA.

REACH Regulation: REACH is the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. It entered into force in 2007, replacing the former legislative framework for chemicals in the EU.



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Creation Date: 19/10/2023
Revision Reference: 001
Revision Date: 19/10/2023

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