



Environmental Product Declaration

Program Operator: Smart EPD®

www.smartepd.com

IN ACCORDANCE WITH EN 15804+A2 AND EN 16810



nora[®]
by **Interface**[®]

SmartEPD-2026-119-0767-01.2

noravant™ timber

Date of Issue

Feb 23, 2026

Expiration Date

Feb 23, 2031

Last Updated

Aug 11, 2026



Refer to the EPD Library at www.smartepd.com for the latest EPD listing information

General Information

Interface, Inc.

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📞 800-634-6032

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🌐 [interface.com](https://www.interface.com)



Product Name:	noravant™ timber
Functional Unit:	1 m2
Declaration Number:	SmartEPD-2026-119-0767-01.2
Date of Issue:	February 23, 2026
Expiration:	February 23, 2031
Last updated:	August 11, 2026
EPD Scope:	Cradle to grave A1 - A3, A4, A5, B1 - B7, C1 - C4, D
Market(s) of Applicability:	Europe, United Kingdom of Great Britain and Northern Ireland

General Organization Information

Interface, Inc. is a global flooring solutions company and sustainability leader, offering an integrated portfolio of carpet tile and resilient flooring products — including Interface® carpet tile and LVT, nora® rubber flooring, and FLOR® premium area rugs for commercial and residential spaces.

Interface designs and manufactures products with a focus on high performance, innovative design, and environmental responsibility. A pioneer in industrial sustainability for decades, the company is committed to becoming a restorative, carbon-negative enterprise by 2040 and is pursuing verified science-based targets for 2030.

Further information can be found at: www.interface.com

Limitations, Liability and Ownership

Limitations

Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc.

Accuracy of Results: EPDs regularly rely on estimations of impacts; the level of accuracy in estimation of effect differs for any particular product line and reported impact.

Comparability: EPDs from different programs may not be comparable. Full conformance with a PCR allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible". Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.

Interface is the owner of this EPD and is responsible for the accuracy of the data.

Standard(s):

EN 15804+A2 and EN 16810

Core PCR:

UL Part A PCR for Building-Related Products and Services v.4

Date of issue: March 01, 2022

Sub-category PCR:

UL Part B: Flooring v.2

Date of issue: September 28, 2018

Valid until: March 31, 2026

Sub-category PCR review panel:

 Contact Smart EPD for more information.

General Program Instructions:

Smart EPD General Program Instructions v.2.0, March 2025

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Verification:

Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071:

 Thomas P Gloria
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Independent external verification of EPD, according to ISO 14025 and reference PCR(s):

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  Industrial Ecology Consultants

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External

External

Functional Unit:

1 m2

Mass:

3.2 kg

Reference Service Life:

35 Years

Product Specificity:

✗ Product Average

- ✓ Product Specific

Product Description

In this Environmental Product Declaration (EPD), resilient thermoplastic elastomer floor coverings of the product line noravant™ timber with different designs are modelled.

Specific characteristics of the noravant™ coverings are:

- covering structure: multi-layered
- no addition of PVC, chlorine-containing polymers and phthalate plasticizers
- very low emissions for good indoor air quality
- no welding required
- easy and hygienic maintenance
- highest resistance to surface and hand disinfectants
- high resistance to chemicals
- high stain resistance, even against medical media

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration EN 4041:2018-05, Resilient, textile, laminate and modular multilayer floor coverings - Essential characteristics and the CE-marking.
For the application and use the respective national provisions apply.

Further information can be found at: www.interface.com

Product Specifications

Product SKU(s):

- Product SKU(s): NA
- Flooring type: Resilient
- Product thickness: 2 mm
- Product weight: 3200 g/m²
- Product form: Rolls
- Resilient - Rolls width: 1220 mm
- Resilient - Rolls length: 15 m

Product Classification Codes:

EC3 - Finishes -> Flooring -> ResilientFlooring
oekobau.dat - 6.2.02



Material/Component Category	Origin	% Mass
Thermoplastic elastomers and natural rubber	Europe/Vietnam	16
Mineral Fillers	Europe	57
Additives	Europe	4
Colour pigments	Europe	1
Post-production recycling	Europe	11
Design & Wear layer	Europe	11

Packaging Material	Origin	kg Mass
PE Foil	Europe	0.03
Wood Pallet	Europe	0.03

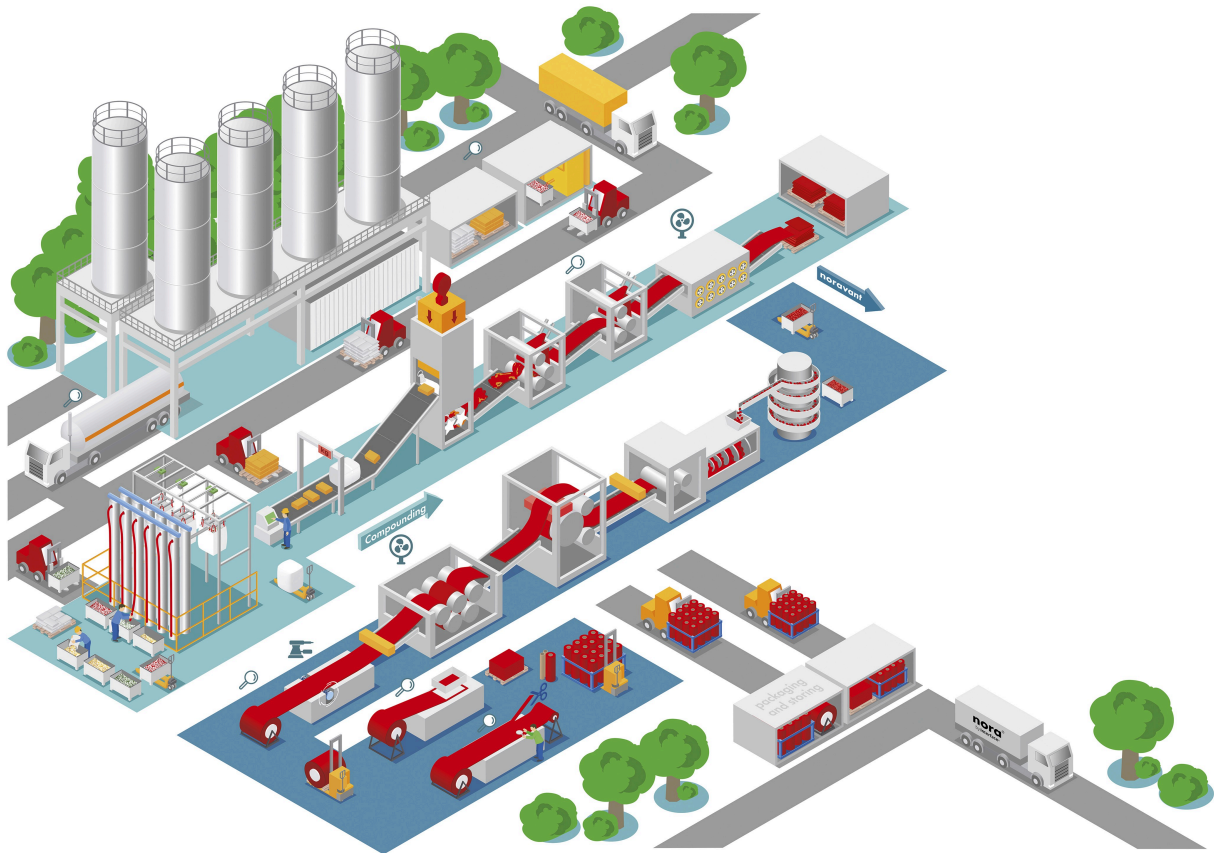
Note:

ND = Module not declared

[illegible]

 nora systems GmbH Höhnerweg 2-4, Weinheim, Germany

Product Flow Diagram



The production stages are weighing, mixing, and granulating. The granulates are continuously molded into sheets. The surface is refined and the backside is sanded. The sheets are wound into rolls.

nora systems GmbH purchases the total electrical energy for production and administration at the site Weinheim from renewable energy sources. Respective evidence has been approved by the verifier. Thermal energy is generated centrally and in heating boilers from natural gas.

Software And Database

LCA Software:

☰ Sphera LCA for Experts (formerly GaBi) v. 10.9

LCI Foreground Database(s):

☰ Sphera Managed LCA Content (formerly GaBi Professional Database) v. 2025.1

📍 Europe

LCI Background Database(s):

☰ Sphera Managed LCA Content (formerly GaBi Professional Database) v. 2025.1

📍 Europe

A foreground LCI database is the database used to model the primary, site-specific data collected for this EPD. A background LCI database is the database used to model generic or non-specific data.

Data Quality

Datasets were, if available, taken from the above mentioned MLC 2025.1 database. Further datasets on the upstream chain of the basic material production are approximated with datasets on similar chemicals or are estimated by consolidation of existing datasets and literature information. The data quality can be described as good.

The data quality ranges from good to very good. The temporal quality of the data is very good with both the manufacturing specific data and the LCA FE background data being from 2024.

Life Cycle Module Description

A1–A3: Product Stage

- A1: Raw material extraction and processing, including recycled materials.
- A2: Transport of raw and processed materials to manufacturing sites.
- A3: Manufacturing at site, including materials, packaging, energy, and waste disposal or recycling. All energy purchased at manufacturing sites is allocated per square meter produced, including offices and warehouses. 100% renewable electricity and thermal energy credits are used for all sites. Waste factor in production. Rubber flooring involves compounding, pressing, vulcanisation, and packaging.

A4–A5: Construction Stage

- A4: Transport of finished product to building site.
- A5: Installation includes ancillary materials (adhesives), trim waste disposal, and packaging waste. Assumed 5% installation waste for all flooring types. Installation waste sent to incineration or landfill, with energy recovery benefits accounted for in Module D. Industry recommendations followed for adhesive types.

B1–B7: Use Stage

- B2: Maintenance effort declared for one year, repeated over the Reference Service Life (RSL). Modular carpet: daily vacuuming, biweekly wet extraction cleaning. Rubber flooring: machine cleaning (annual), manual cleaning (biweekly). LVT: dust mopping, buffing, cleaning solution, electricity, water, and wastewater treatment.
- Other Use Modules (B1, B3–B7): Not relevant or not declared for these flooring products.

C1–C4: End of Life

- C2: Transport of waste to local disposal using diesel truck datasets.
- C3: Waste processing for reuse, recovery, or recycling.
- C4: Disposal of post-consumer carpet tile, incineration or landfill. Energy recovery from incineration is accounted for in Module D.

Module D: Benefits and Loads Beyond the System Boundary

- Captures energy recovery from end-of-life incineration. Only modelled for incineration scenarios, as this is the most likely pathway for energy recovery. Credits for energy generated during incineration are included.

LCA Discussion

Allocation Procedure

Co-product allocation:

No co-products are produced in the manufacturing process for noravant™ timber, so allocation between co-products is not required.

Recycled and secondary raw materials:

Allocation for recycled content (such as post-production recycling and recycled packaging) follows the “cut-off” approach. Only the environmental burdens associated with the collection and processing of recycled materials up to the point of entry into the product system are included. No upstream burdens from previous product life cycles are assigned to the recycled content.

If multiple products are produced in the same facility, shared energy and utilities are allocated according to the proportion of production output (mass or area) attributable to each product. No credits are taken for recycling of production waste; all relevant impacts are assigned to the declared product.

In practice, this meant that all relevant flows—such as raw materials, processing, transportation, manufacturing, packaging, installation, maintenance, disposal, and recycling—were considered in the assessment. Flows that were excluded typically involved capital goods and equipment, or human labor and commuting, as these were not expected to contribute significantly to the results. Where specific data from suppliers was unavailable, conservative proxy datasets were used to ensure that any potentially important flows were still represented.

Energy Attribute Certificates (EACs) such as Renewable Energy Certificates (RECs) or Power Purchase Agreements (PPAs) are included in the baseline reported results:	✓ Yes
Electricity Source:	Offsite
Renewable type(s):	Wind, Hydra, Solar
Percent of EPD Owner's product-related electricity covered:	100 %
Commitment pledged for entire EPD validity period:	✓ Yes
Electricity accounting methodology:	Market-based

Fuel Type:	Diesel
Liters of Fuel:	0.0082 l/100km
Vehicle Type:	Truck

Transport Distance:	500 km
Capacity Utilization:	61% %
Packaging Mass:	0.06 kg
Gross density of products transported:	1600 kg/m3
Capacity utilization volume factor:	=1
Assumptions for scenario development:	Transport is from the factory gate to the place of installation Thickness of 2 mm 0.0107 kg diesel per 500 km per kg of product 0.00277 kg Heavy Fuel Oil per 1000 km per kg of product All values refer to the declared functional unit (1 m²) Packaging waste and installation waste are considered in subsequent modules (A5, C1–C4) Preparation of the floor and auxiliaries (adhesives, fixing agents, PET connectors) are included
Fuel Type - Ship:	Heavy Fuel Oil
Transport Distance - Ship:	1000 km
Vehicle Type:	Ship
Capacity Utilization:	70 %
Liters of Fuel:	0.00107 l/100 km

Installation in to the building/construction site (A5)

A5 Module

Installation Scrap Rate Assumed:	5 %
Ancillary Materials:	0.3 kg
Net Fresh Water Consumption Specified by Water	0 m3
Source and Fate:	
Other Resources:	0 kg
Electricity Consumption:	0 kWh
Other Energy Carriers:	0 MJ
Product Lost per Declared/Functional Unit:	0.16 kg
Waste Materials at the Construction Site Before	0.16 kg
Waste Processing:	
Output Materials Resulting from On-site Waste	0.01 kg
Processing:	
Mass of Packaging Waste Specified by Type:	0.01 kg
Biogenic Carbon Contained in Packaging (kg C):	0.05 kg
Assumptions for scenario development:	The installation of the floor covering is based on the technical regulations of DIN 18365 Flooring works. Suitable subfloors are made of screed according DIN 18353, hard poured asphalt according to DIN 18354 Asphalt flooring work, chipboards, plywood, etc. Before installing rubber floor coverings, the subfloor generally has to be levelled. The application of the adhesives over the entire surface is done in accordance with the installation recommendations of the nora systems GmbH, using adhesives and further auxiliary material approved and available e.g. at www.nora.com . When selecting the installation materials the requirements of the basic award criteria of the Blue Angel – 'Low-Emission Floor Covering Adhesive and other Installation Materials' (DE-UZ 113) should be observed, alternatively GEV-EMICODE EC1plus. These specifications ensure excellent health protection due to minimized emissions. In addition, the instructions of the laying material manufacturers are generally to be followed. When working with laying auxiliary material, the latest version of the German standard TRGS 610 is to be complied with. Offcuts should be used for energy recovery. Initial cleaning and initial polishing may only be carried out after the bonding phase of the adhesive, i.e. at the earliest 48 hours after installation.

Maintenance (B2)

B2 Module

Maintenance Cycle:	3640 Cycles/RSL 7800 Cycles/ESL
Net Fresh Water Consumption Specified by Water Source and Fate:	1.92e-4 m3
Energy Input:	6.73e-4 kWh
Waste Materials from Maintenance:	0.0017 kg
Maintenance Process Information:	Cleaning of the floor covering depends on the use of the premises. A kind of 'average' cleaning scenario is assumed following the recommendation of the manufacturer. 1x yearly: machine intensive cleaning with 250 ml/m ² cleaning solution (5% solution); use of single disc machine (1,1 kW, 0,5 h/100 m ²) and wet vacuum cleaner (1,0 kW, 0,25 h/100 m ²); 2x weekly: manual cleaning with 80 ml/m ² cleaning solution (0,5% solution);
Further assumptions for scenario development:	RSL = 35 years ESL = 75 years

End of Life (C1 - C4)

C1 - C4 Modules

100% Landfill

Collection Process

Collected Separately: 3.49 kg

Recovery

Landfill: 3.49 kg

Disposal

Product or Material for Final Disposal: 0 kg

Assumptions for scenario development:

Scenario 1: 100% Landfill

100% Energy Recovery

Collection Process

Recovery

Incineration with Energy Recovery: 3.49 kg

Disposal

Product or Material for Final Disposal: 3.49 kg

Assumptions for scenario development:

Scenario 2: 100% Energy Recovery

Results

Table 3. Environmental Impact Assessment Results

IPCC AR5 GWP 100, TRACI 2.2, CML 2016 v4.8, EF3.1

per 1 m2 of product.

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

1 m2 of product per RSL - EoL Landfill

Impact Category	Unit	Method	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	IPCC AR5 GWP 100	3.49e+0	1.69e-1	8.38e-1	ND	3.36e-1	ND	ND	ND	ND	ND	ND	1.39e-2	0	1.08e-1	2.98e-2
ODP	kg CFC 11 eq	TRACI 2.2	3.24e-9	2.99e-14	-2.52e-8	ND	5.44e-11	ND	ND	ND	ND	ND	ND	2.70e-15	0	4.25e-13	-3.02e-13
AP	kg SO2 eq	TRACI 2.2	8.94e-3	1.04e-3	1.88e-4	ND	8.41e-4	ND	ND	ND	ND	ND	ND	4.43e-5	0	5.35e-4	-1.78e-4
EP-freshwater	kg P eq	TRACI 2.2	8.15e-6	1.64e-7	1.35e-6	ND	4.91e-6	ND	ND	ND	ND	ND	ND	1.66e-8	0	3.20e-5	-4.53e-7
EP-marine	kg N eq	TRACI 2.2	3.50e-3	8.69e-4	2.45e-4	ND	2.96e-4	ND	ND	ND	ND	ND	ND	3.83e-5	0	2.32e-4	-1.22e-4
POCP	kg O3 eq	TRACI 2.2	1.14e-1	2.71e-2	8.70e-3	ND	1.14e-2	ND	ND	ND	ND	ND	ND	9.52e-4	0	8.37e-3	-3.70e-3
ODP	kg CFC-11 eq	CML 2016 v4.8	2.92e-9	2.99e-14	-2.32e-8	ND	5.12e-11	ND	ND	ND	ND	ND	ND	2.70e-15	0	4.25e-13	-3.02e-13
AP	kg SO2 eq	CML 2016 v4.8	8.65e-3	8.05e-4	9.45e-5	ND	8.52e-4	ND	ND	ND	ND	ND	ND	3.35e-5	0	5.21e-4	-1.50e-4
EP	kg PO4 eq	CML 2016 v4.8	7.79e-3	1.81e-4	4.40e-4	ND	1.47e-4	ND	ND	ND	ND	ND	ND	8.88e-6	0	6.94e-4	-4.48e-5
POCP	kg C2H4 eq	CML 2016 v4.8	3.47e-3	-7.05e-5	2.58e-4	ND	2.92e-4	ND	ND	ND	ND	ND	ND	-9.77e-6	0	4.57e-5	-3.46e-6
ADP-fossil	MJ	CML 2016 v4.8	9.22e+1	2.09e+0	1.54e+1	ND	7.48e+0	ND	ND	ND	ND	ND	ND	1.74e-1	0	1.67e+0	-8.39e-1
GWP- total	kg CO2 eq	EF3.1	3.41e+0	1.66e-1	8.23e-1	ND	3.29e-1	ND	ND	ND	ND	ND	ND	1.36e-2	0	1.06e-1	3.10e-2
GWP- fossil	kg CO2 eq	EF3.1	3.87e+0	1.67e-1	8.09e-1	ND	3.19e-1	ND	ND	ND	ND	ND	ND	1.37e-2	0	1.05e-1	-5.89e-2
GWP-biogenic	kg CO2 eq	EF3.1	-4.71e-1	-2.88e-3	2.03e-1	ND	9.68e-3	ND	ND	ND	ND	ND	ND	-3.03e-4	0	2.32e-1	9.03e-2
GWP-luluc	kg CO2 eq	EF3.1	1.24e-2	1.36e-3	6.37e-4	ND	8.94e-5	ND	ND	ND	ND	ND	ND	1.41e-4	0	2.89e-4	-3.88e-4
ODP	kg CFC11 eq	EF3.1	3.13e-9	2.52e-14	-1.77e-8	ND	2.75e-11	ND	ND	ND	ND	ND	ND	2.27e-15	0	3.60e-13	-2.57e-13

Impact Category	Unit	Method	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
AP	mol H+ eq	EF3.1	1.00e-2	1.14e-3	1.95e-4	ND	1.00e-3	ND	ND	ND	ND	ND	ND	4.90e-5	0	6.28e-4	-2.07e-4
PM	disease incidence	EF3.1	8.96e-8	2.03e-8	-9.29e-10	ND	1.28e-8	ND	ND	ND	ND	ND	ND	3.39e-10	0	6.46e-9	-2.75e-9
IRP	kBq U235 eq	EF3.1	1.25e-1	5.24e-4	1.16e-1	ND	1.30e-1	ND	ND	ND	ND	ND	ND	4.75e-5	0	3.37e-3	-5.58e-3
POCP	kg NMVOC eq	EF3.1	1.28e-2	1.20e-3	9.84e-4	ND	9.93e-4	ND	ND	ND	ND	ND	ND	4.48e-5	0	4.30e-4	-1.80e-4
EP-fw	kg P eq	EF3.1	1.72e-5	3.64e-7	2.79e-6	ND	1.09e-5	ND	ND	ND	ND	ND	ND	3.69e-8	0	5.88e-5	-1.01e-6
EP-marine	kg N eq	EF3.1	2.40e-3	5.09e-4	1.72e-4	ND	2.16e-4	ND	ND	ND	ND	ND	ND	2.33e-5	0	1.36e-4	-9.08e-5
EP-terrestrial	mol N eq	EF3.1	2.57e-2	5.55e-3	1.83e-3	ND	1.91e-3	ND	ND	ND	ND	ND	ND	2.52e-4	0	1.48e-3	-8.49e-4
SQI	dimensionless	EF3.1	3.07e+1	7.48e-1	1.61e+0	ND	2.16e-1	ND	ND	ND	ND	ND	ND	7.75e-2	0	2.70e-1	-3.49e+0
WDP	m3 world eq deprived	EF3.1	2.10e+0	6.68e-4	2.41e-1	ND	5.49e-2	ND	ND	ND	ND	ND	ND	6.26e-5	0	1.30e-2	-1.12e-2
ADP-fossil	MJ, net calorific value	EF3.1	1.02e+2	2.10e+0	1.55e+1	ND	8.01e+0	ND	ND	ND	ND	ND	ND	1.75e-1	0	1.74e+0	-9.51e-1
ADP-minerals&metals	kg Sb eq	EF3.1	2.71e-6	9.64e-9	3.08e-7	ND	5.85e-8	ND	ND	ND	ND	ND	ND	9.10e-10	0	7.16e-9	-2.81e-8
ETP-fwio	CTUe	EF3.1	3.01e+1	1.52e+0	6.59e+0	ND	1.46e+0	ND	ND	ND	ND	ND	ND	1.27e-1	0	1.16e+0	-1.64e-1
ETP-fwo	CTUe	EF3.1	1.37e+0	9.72e-1	1.10e-1	ND	2.24e-2	ND	ND	ND	ND	ND	ND	1.01e-1	0	2.84e+0	-1.36e-1
HTP-cio	CTUh	EF3.1	5.22e-10	3.32e-11	9.03e-11	ND	7.13e-11	ND	ND	ND	ND	ND	ND	2.99e-12	0	5.02e-11	-7.56e-12
HTP-co	CTUh	EF3.1	2.40e-9	9.81e-13	1.28e-10	ND	1.91e-11	ND	ND	ND	ND	ND	ND	8.66e-14	0	4.69e-12	-4.33e-12
HTP-ncio	CTUh	EF3.1	1.76e-8	1.62e-9	1.77e-9	ND	6.57e-9	ND	ND	ND	ND	ND	ND	1.61e-10	0	6.18e-10	-7.27e-10
HTP-nco	CTUh	EF3.1	1.08e-9	1.11e-10	1.46e-10	ND	6.22e-11	ND	ND	ND	ND	ND	ND	1.08e-11	0	3.57e-10	-2.08e-11

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

GWP = Global Warming Potential, 100 years (may also be denoted as GWP-total, GWP-fossil (fossil fuels), GWP-biogenic (biogenic sources), GWP-luluc (land use and land use change)), ODP = Ozone Depletion Potential, AP = Acidification Potential, EP = Eutrophication Potential, SFP = Smog Formation Potential, POCP = Photochemical oxidant creation potential, ADP-Fossil = Abiotic depletion potential for fossil resources, ADP-Minerals&Metals = Abiotic depletion potential for non-fossil resources, WDP = Water deprivation potential, PM = Particulate Matter Emissions, IRP = Ionizing radiation, human health, ETP-fw = Eco-toxicity (freshwater), HTP-c = Human toxicity (cancer), HTP-nc = Human toxicity (non-cancer), SQP = Soil quality index.

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase when product performance and specifications have been established and serve as a functional unit for comparison. Environmental impact results shall be converted to a functional unit basis before any comparison is attempted. Any comparison of EPDs shall be subject to the requirements of ISO 21930 or EN 15804. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries, are based on different product category rules or are missing relevant environmental impacts. Such comparison can be inaccurate, and could lead to erroneous selection of materials or products which are higher-impact, at least in some impact categories.

1 m2 of product per RSL - EoL Incineration

Impact Category	Unit	Method	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	IPCC AR5 GWP 100	3.49e+0	1.69e-1	8.38e-1	ND	3.36e-1	ND	ND	ND	ND	ND	ND	1.39e-2	2.77e+0	0	-4.74e-2
ODP	kg CFC 11 eq	TRACI 2.2	3.24e-9	2.99e-14	-2.52e-8	ND	5.44e-11	ND	ND	ND	ND	ND	ND	2.70e-15	-5.43e-7	0	-2.31e-12
AP	kg SO2 eq	TRACI 2.2	8.94e-3	1.04e-3	1.88e-4	ND	8.41e-4	ND	ND	ND	ND	ND	ND	4.43e-5	-2.91e-2	0	-3.21e-4
EP-freshwater	kg P eq	TRACI 2.2	8.15e-6	1.64e-7	1.35e-6	ND	4.91e-6	ND	ND	ND	ND	ND	ND	1.66e-8	-3.83e-7	0	-5.25e-7
EP-marine	kg N eq	TRACI 2.2	3.50e-3	8.69e-4	2.45e-4	ND	2.96e-4	ND	ND	ND	ND	ND	ND	3.83e-5	-5.38e-3	0	-1.83e-4
POCP	kg O3 eq	TRACI 2.2	1.14e-1	2.71e-2	8.70e-3	ND	1.14e-2	ND	ND	ND	ND	ND	ND	9.52e-4	-2.02e-1	0	-5.74e-3
ODP	kg CFC-11 eq	CML 2016 v4.8	2.92e-9	2.99e-14	-2.32e-8	ND	5.12e-11	ND	ND	ND	ND	ND	ND	2.70e-15	-4.98e-7	0	-2.31e-12
AP	kg SO2 eq	CML 2016 v4.8	8.65e-3	8.05e-4	9.45e-5	ND	8.52e-4	ND	ND	ND	ND	ND	ND	3.35e-5	-3.19e-2	0	-2.86e-4
EP	kg PO4 eq	CML 2016 v4.8	7.79e-3	1.81e-4	4.40e-4	ND	1.47e-4	ND	ND	ND	ND	ND	ND	8.88e-6	-1.07e-3	0	-6.41e-5
POCP	kg C2H4 eq	CML 2016 v4.8	3.47e-3	-7.05e-5	2.58e-4	ND	2.92e-4	ND	ND	ND	ND	ND	ND	-9.77e-6	-1.65e-3	0	-1.49e-5
ADP-fossil	MJ	CML 2016 v4.8	9.22e+1	2.09e+0	1.54e+1	ND	7.48e+0	ND	ND	ND	ND	ND	ND	1.74e-1	-6.02e+1	0	-1.69e+0
GWP- total	kg CO2 eq	EF3.1	3.41e+0	1.66e-1	8.23e-1	ND	3.29e-1	ND	ND	ND	ND	ND	ND	1.36e-2	2.84e+0	0	-4.51e-2
GWP- fossil	kg CO2 eq	EF3.1	3.87e+0	1.67e-1	8.09e-1	ND	3.19e-1	ND	ND	ND	ND	ND	ND	1.37e-2	2.36e+0	0	-1.34e-1
GWP-biogenic	kg CO2 eq	EF3.1	-4.71e-1	-2.88e-3	2.03e-1	ND	9.68e-3	ND	ND	ND	ND	ND	ND	-3.03e-4	2.32e-1	0	8.95e-2
GWP-luluc	kg CO2 eq	EF3.1	1.24e-2	1.36e-3	6.37e-4	ND	8.94e-5	ND	ND	ND	ND	ND	ND	1.41e-4	0	0	-6.36e-4
ODP	kg CFC11 eq	EF3.1	3.13e-9	2.52e-14	-1.77e-8	ND	2.75e-11	ND	ND	ND	ND	ND	ND	2.27e-15	-3.81e-7	0	-1.97e-12
AP	mol H+ eq	EF3.1	1.00e-2	1.14e-3	1.95e-4	ND	1.00e-3	ND	ND	ND	ND	ND	ND	4.90e-5	-3.51e-2	0	-3.71e-4
PM	disease incidence	EF3.1	8.96e-8	2.03e-8	-9.29e-10	ND	1.28e-8	ND	ND	ND	ND	ND	ND	3.39e-10	-3.51e-7	0	-4.11e-9
IRP	kBq U235 eq	EF3.1	1.25e-1	5.24e-4	1.16e-1	ND	1.30e-1	ND	ND	ND	ND	ND	ND	4.75e-5	-9.86e-2	0	-4.55e-2
POCP	kg NMVOC eq	EF3.1	1.28e-2	1.20e-3	9.84e-4	ND	9.93e-4	ND	ND	ND	ND	ND	ND	4.48e-5	-1.04e-2	0	-2.78e-4
EP-fw	kg P eq	EF3.1	1.72e-5	3.64e-7	2.79e-6	ND	1.09e-5	ND	ND	ND	ND	ND	ND	3.69e-8	-5.17e-7	0	-1.17e-6
EP-marine	kg N eq	EF3.1	2.40e-3	5.09e-4	1.72e-4	ND	2.16e-4	ND	ND	ND	ND	ND	ND	2.33e-5	-3.14e-3	0	-1.30e-4
EP-terrestrial	mol N eq	EF3.1	2.57e-2	5.55e-3	1.83e-3	ND	1.91e-3	ND	ND	ND	ND	ND	ND	2.52e-4	-3.22e-2	0	-1.29e-3

Impact Category	Unit	Method	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
SQI	dimensionless	EF3.1	3.07e+1	7.48e-1	1.61e+0	ND	2.16e-1	ND	ND	ND	ND	ND	ND	7.75e-2	0	0	-4.10e+0
WDP	m3 world eq deprived	EF3.1	2.10e+0	6.68e-4	2.41e-1	ND	5.49e-2	ND	ND	ND	ND	ND	ND	6.26e-5	5.26e-1	0	-3.00e-2
ADP-fossil	MJ, net calorific value	EF3.1	1.02e+2	2.10e+0	1.55e+1	ND	8.01e+0	ND	ND	ND	ND	ND	ND	1.75e-1	-7.76e+1	0	-2.48e+0
ADP-minerals&metals	kg Sb eq	EF3.1	2.71e-6	9.64e-9	3.08e-7	ND	5.85e-8	ND	ND	ND	ND	ND	ND	9.10e-10	-3.98e-6	0	-4.37e-8
ETP-fwio	CTUe	EF3.1	3.01e+1	1.52e+0	6.59e+0	ND	1.46e+0	ND	ND	ND	ND	ND	ND	1.27e-1	-1.10e+1	0	-3.90e-1
ETP-fwo	CTUe	EF3.1	1.37e+0	9.72e-1	1.10e-1	ND	2.24e-2	ND	ND	ND	ND	ND	ND	1.01e-1	-5.97e-3	0	-1.68e-1
HTP-cio	CTUh	EF3.1	5.22e-10	3.32e-11	9.03e-11	ND	7.13e-11	ND	ND	ND	ND	ND	ND	2.99e-12	-1.66e-10	0	-1.23e-11
HTP-co	CTUh	EF3.1	2.40e-9	9.81e-13	1.28e-10	ND	1.91e-11	ND	ND	ND	ND	ND	ND	8.66e-14	-2.49e-10	0	-2.40e-11
HTP-ncio	CTUh	EF3.1	1.76e-8	1.62e-9	1.77e-9	ND	6.57e-9	ND	ND	ND	ND	ND	ND	1.61e-10	-1.50e-8	0	-1.23e-9
HTP-nco	CTUh	EF3.1	1.08e-9	1.11e-10	1.46e-10	ND	6.22e-11	ND	ND	ND	ND	ND	ND	1.08e-11	-5.42e-10	0	-3.25e-11

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

GWP = Global Warming Potential, 100 years (may also be denoted as GWP-total, GWP-fossil (fossil fuels), GWP-biogenic (biogenic sources), GWP-luluc (land use and land use change)), ODP = Ozone Depletion Potential, AP = Acidification Potential, EP = Eutrophication Potential, SFP = Smog Formation Potential, POCP = Photochemical oxidant creation potential, ADP-Fossil = Abiotic depletion potential for fossil resources, ADP-Minerals&Metals = Abiotic depletion potential for non-fossil resources, WDP = Water deprivation potential, PM = Particulate Matter Emissions, IRP = Ionizing radiation, human health, ETP-fw = Eco-toxicity (freshwater), HTP-c = Human toxicity (cancer), HTP-nc = Human toxicity (non-cancer), SQP = Soil quality index.

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase when product performance and specifications have been established and serve as a functional unit for comparison. Environmental impact results shall be converted to a functional unit basis before any comparison is attempted. Any comparison of EPDs shall be subject to the requirements of ISO 21930 or EN 15804. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries, are based on different product category rules or are missing relevant environmental impacts. Such comparison can be inaccurate, and could lead to erroneous selection of materials or products which are higher-impact, at least in some impact categories.

Table 4. Resource Use Indicator

per 1 m2 of product.

1 m2 of product per RSL - EoL Landfill

Indicator	Unit	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	3.52e+1	1.29e-1	1.67e+0	ND	5.50e-1	ND	ND	ND	ND	ND	ND	1.32e-2	0	2.91e-1	-1.41e+0
PERM	MJ	1.33e+1	0	6.66e-1	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
PERT	MJ	4.85e+1	1.29e-1	2.34e+0	ND	5.50e-1	ND	ND	ND	ND	ND	ND	1.32e-2	0	2.91e-1	-1.41e+0
PENRE	MJ	3.40e+0	2.10e+0	1.06e+1	ND	8.01e+0	ND	ND	ND	ND	ND	ND	1.75e-1	0	1.74e+0	-9.51e-1
PENRM	MJ	7.80e+1	0	3.90e+0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
PENRT	MJ	8.17e+1	2.10e+0	1.45e+1	ND	8.01e+0	ND	ND	ND	ND	ND	ND	1.75e-1	0	1.74e+0	-9.51e-1
SM	kg	3.52e-1	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
RSF	MJ	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
NRSF	MJ	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
FW	m3	5.65e-2	6.54e-5	5.98e-3	ND	1.41e-3	ND	ND	ND	ND	ND	ND	6.53e-6	0	3.81e-4	-5.09e-4
RE	MJ	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

RPRE or PERE = Renewable primary resources used as energy carrier (fuel), RPRM or PERM = Renewable primary resources with energy content used as material, RPRT or PERT = Total use of renewable primary resources with energy content, NRPRE or PENRE = Non-renewable primary resources used as an energy carrier (fuel), NRPRM or PENRM = Non-renewable primary resources with energy content used as material, NRPRM or PENRM = Total non-renewable primary resources with energy content, SM = Secondary materials, RSF = Renewable secondary fuels, NRSF = Non-renewable secondary fuels, RE = Recovered energy, ADPF = Abiotic depletion potential, FW = Use of net freshwater resources, VOCs = Volatile Organic Compounds.

1 m2 of product per RSL - EoL Incineration

Indicator	Unit	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	3.52e+1	1.29e-1	1.67e+0	ND	5.50e-1	ND	ND	ND	ND	ND	ND	1.32e-2	-7.23e+0	0	-2.46e+0
PERM	MJ	1.33e+1	0	6.66e-1	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
PERT	MJ	4.85e+1	1.29e-1	2.34e+0	ND	5.50e-1	ND	ND	ND	ND	ND	ND	1.32e-2	-7.23e+0	0	-2.46e+0
PENRE	MJ	3.40e+0	2.10e+0	1.06e+1	ND	8.01e+0	ND	ND	ND	ND	ND	ND	1.75e-1	-7.76e+1	0	-2.48e+0
PENRM	MJ	7.80e+1	0	3.90e+0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
PENRT	MJ	8.17e+1	2.10e+0	1.45e+1	ND	8.01e+0	ND	ND	ND	ND	ND	ND	1.75e-1	-7.76e+1	0	-2.48e+0
SM	kg	3.52e-1	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
RSF	MJ	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
NRSF	MJ	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
FW	m3	5.65e-2	6.54e-5	5.98e-3	ND	1.41e-3	ND	ND	ND	ND	ND	ND	6.53e-6	1.23e-2	0	-1.32e-3
RE	MJ	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

RPRE or PERE = Renewable primary resources used as energy carrier (fuel), RPRM or PERM = Renewable primary resources with energy content used as material, RPRT or PERT = Total use of renewable primary resources with energy content, NRPRE or PENRE = Non-renewable primary resources used as an energy carrier (fuel), NRPRM or PENRM = Non-renewable primary resources with energy content used as material, NRPT or PENRT = Total non-renewable primary resources with energy content, SM = Secondary materials, RSF = Renewable secondary fuels, NRSF = Non-renewable secondary fuels, RE = Recovered energy, ADPF = Abiotic depletion potential, FW = Use of net freshwater resources, VOCs = Volatile Organic Compounds.

Table 5. Waste and Output Flow Indicators

per 1 m2 of product.

1 m2 of product per RSL - EoL Landfill

Indicator	Unit	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	2.85e-5	8.19e-11	2.82e-4	ND	4.14e-4	ND	ND	ND	ND	ND	ND	7.04e-12	0	3.90e-10	-9.31e-9
NHWD	kg	4.49e-2	2.69e-4	1.85e-2	ND	1.80e-2	ND	ND	ND	ND	ND	ND	2.45e-5	0	3.47e+0	-1.69e-3
RWD	kg	9.79e-4	3.67e-6	-7.06e-5	ND	2.03e-4	ND	ND	ND	ND	ND	ND	3.31e-7	0	2.51e-5	-3.42e-5
CRU	kg	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
MFR	kg	0	0	5.99e-2	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
MER	kg	0	0	3.99e-3	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
EEE	MJ	0	0	9.78e-4	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

HWD = Hazardous waste disposed, NHWD = Non-hazardous waste disposed, RWD = Radioactive waste disposed, HLRW = High-level radioactive waste, ILLRW = Intermediate- and low-level radioactive waste, CRU = Components for re-use, MFR or MR = Materials for recycling, MER = Materials for energy recovery, MNER = Materials for incineration, no energy recovery, EE or EEE = Recovered energy exported from the product system, EET = Exported thermal energy.

1 m2 of product per RSL - EoL Incineration

Indicator	Unit	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	2.85e-5	8.19e-11	2.82e-4	ND	4.14e-4	ND	ND	ND	ND	ND	ND	7.04e-12	0	0	-1.13e-8
NHWD	kg	4.49e-2	2.69e-4	1.85e-2	ND	1.80e-2	ND	ND	ND	ND	ND	ND	2.45e-5	0	0	-2.88e-3
RWD	kg	9.79e-4	3.67e-6	-7.06e-5	ND	2.03e-4	ND	ND	ND	ND	ND	ND	3.31e-7	-6.21e-3	0	-2.76e-4
CRU	kg	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
MFR	kg	0	0	5.99e-2	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
MER	kg	0	0	3.99e-3	ND	0	ND	ND	ND	ND	ND	ND	0	3.49e+0	0	0
EEE	MJ	0	0	9.78e-4	ND	0	ND	ND	ND	ND	ND	ND	0	8.55e-1	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

HWD = Hazardous waste disposed, NHWD = Non-hazardous waste disposed, RWD = Radioactive waste disposed, HLRW = High-level radioactive waste, ILLRW = Intermediate- and low-level radioactive waste, CRU = Components for re-use, MFR or MR = Materials for recycling, MER = Materials for energy recovery, MNER = Materials for incineration, no energy recovery, EE or EEE = Recovered energy exported from the product system, EET = Exported thermal energy.

Table 6. Carbon Emissions and Removals

per 1 m2 of product.

1 m2 of product per RSL - EoL Landfill

Indicator	Unit	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BCRP	kg CO2	2.32e-1	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
BCEP	kg CO2	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	2.32e-1	0
BCRK	kg CO2	1.90e-1	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
BCEK	kg CO2	0	0	1.90e-1	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

BCRP = Biogenic Carbon Removal from Product, BCEP = Biogenic Carbon Emission from Product, BCRK = Biogenic Carbon Removal from Packaging, BCEK = Biogenic Carbon Emission from Packaging, BCEW = Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes, CCE = Calcination Carbon Emissions, CCR = Carbonation Carbon Removals, CWNR = Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes, GWP-luc = Carbon Emissions from Land-use Change.

1 m2 of product per RSL - EoL Incineration

Indicator	Unit	A1 - A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BCRP	kg CO2	2.32e-1	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
BCEP	kg CO2	0	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	2.32e-1	0	0
BCRK	kg CO2	1.90e-1	0	0	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0
BCEK	kg CO2	0	0	1.90e-1	ND	0	ND	ND	ND	ND	ND	ND	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

BCRP = Biogenic Carbon Removal from Product, BCEP = Biogenic Carbon Emission from Product, BCRK = Biogenic Carbon Removal from Packaging, BCEK = Biogenic Carbon Emission from Packaging, BCEW = Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes, CCE = Calcination Carbon Emissions, CCR = Carbonation Carbon Removals, CWNR = Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes, GWP-luc = Carbon Emissions from Land-use Change.

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