# **ENVIRONMENTAL PRODUCT DECLARATION**

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	Etex Building Performance International
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ETE-20240055-IBA1-EN
Issue date	19.12.2024
Valid to	18.12.2029

# PROMALIGHT® 1000X PROMAT



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PROMAT	PROMALIGHT® 1000X							
Programme holder	Owner of the declaration							
IBU – Institut Bauen und Umwelt e.V. Hegelplatz 1 10117 Berlin Germany	Etex Building Performance International Rue Marcel Demonque 500 84915 Avignon Cedex 9 France							
Declaration number	Declared product / declared unit							
EPD-ETE-20240055-IBA1-EN	1 m <sup>2</sup> (thickness 25 mm) of a PROMALIGHT® 1000X microporous insulation panel							
This declaration is based on the product category rules:	Scope:							
Mineral insulating materials, 01.08.2021 (PCR checked and approved by the SVR)	The EPD covers PROMALIGHT®-1000X products produced by MICROTHERM® (part of ETEX group) in Sint-Niklaas, Belgium. The product is delivered as naked board or with an aluminium or PE foil. The EPD will be based on the naked boards, and the impact of the PE and							
Issue date 19.12.2024	aluminium foil for the declared unit is added as an Annex. The owner of the declaration shall be liable for the underlying informatic and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.							
Valid to 18.12.2029	The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as <i>EN 15804</i> .							
	Verification							
	The standard EN 15804 serves as the core PCR							
	Independent verification of the declaration and data according to ISO 14025:2011							
	internally X externally							
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Mr Marcel Gómez, (Independent verifier)

# 2. Product

### 2.1 Product description/Product definition

PROMALIGHT®-1000X is a lightweight microporous insulation board. The formulation is an opacified blend of filament reinforced pyrogenic silica with silicon carbide as opacifier. The PROMALIGHT® range of products is available as naked boards, or with a PE foil or Aluminum covering. The EPD will be based on the naked boards, and the impact of the PE and alu foil will be added as an Annex.

No EN or ETA norm as these products are not used in building & construction.

For the application and use the respective national provisions apply.

## 2.2 Application

Microporous insulation offers an extremely low thermal conductivity, close to the lowest theoretically possible at high temperatures. Microporous materials are the preferred choice when a large temperature reduction is required within a limited space, or when strict heat loss or surface temperature requirements are specified.

#### HEAVY Industry

Back-up insulation in steel and aluminium industry Glass and ceramics industry (launders, holding and smelter furnace, ...)

• ENERGY

Fuel cells (SOFC)

OIL AND GAS

Petrochemical industry (cracking furnace, hydrogen reformer ...)

### 2.3 Technical Data

## **Technical data**

Name	Value	Unit
Thermal conductivity at 200 °C - 800 °C (ISO 8302, ASTM C177)	0.023 - 0.036	W/(mK)
Nominal density (depending on thickness)	280	kg/m <sup>3</sup>
Compressive strength ASTM C165	0.32	N/mm <sup>2</sup>

Performance data of the product with respect to its characteristics in accordance with the relevant technical provision (no CE-marking)

#### 2.4 Delivery status

Length: 1000 mm Width: 610 mm Thickness: 10-50 mm

# 2.5 Base materials/Ancillary materials

- Main constituents:
  - Fumed silica
  - Silicium carbide
  - Glass fiber

This product/article/at least one partial article contains substances listed in the *candidate list* (date: 16.12.2022) exceeding 0.1 percentage by mass: no

This product/article/at least one partial article contains other carcinogenic, mutagenic, reprotoxic (CMR) substances in categories 1A or 1B which are not on the *candidate list*,

exceeding 0.1 percentage by mass: no

Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the (EU) Ordinance on Biocide Products No. 528/2012): no

#### 2.6 Manufacture

PROMALIGHT® insulation boards are produced on a fully integrated and automated press. The raw materials are mixed in multiple mix vessels. The mix is then fed into the mold and pressed into boards. The boards are then sawn to final standard size and can be shrink-wrapped or glued with PE foil or aluminum covering facing in-line. Afterwards the boards are automatically stacked on a pallet for final packaging and dispatch.



#### 2.7 Environment and health during manufacturing

Environmental, occupational health, safety and quality management at the Sint-Niklaas plant are in accordance with the following standards:

- ISO 14001;2015
- ISO 9001;2015
- ISO 45001:2018

#### 2.8 Product processing/Installation

Not considered in the scope of the EPD, as a wide range of different applications and installation scenarios can be applied.

#### 2.9 Packaging

A wooden pallet, carton and plastic packaging are used to pack the product for transport to the installation/customer.

#### 2.10 Condition of use

No maintenance is needed.

#### 2.11 Environment and health during use

Under normal conditions of use, the product does not cause any adverse health effects or release of volatile organic compounds (VOCs) into indoor air. No environmental impact on water, air or soil is expected due to the extremely low metal release from the low maintenance requirements.

## 2.12 Reference service life

The reference service life is not declared, as the EPD does not cover the use stage. The RSL depends on the application. Under normal conditions of use, the product is supposed to retain its characteristics as long as the application lasts.

#### 2.13 Extraordinary effects

## Fire

All microporous products are A1 non-combustible according EN13501,

#### **Fire protection**

Name	Value
Building material class	A1
Burning droplets Not available	/
Smoke gas development Not available	/

### Water

Tests on the product performance including possible impacts on the environment following the unforeseeable influence of water, e.g. flooding showed that no risks are expected to occur in terms of environment and human health.

### Mechanical destruction

In the case of mechanical destruction, no risks are expected to occur in terms of environment and human health.

### 2.14 Re-use phase

No reuse/recycling has been considered.

# 2.15 Disposal

Waste from these materials may be generally disposed off at a landfill, which has been licensed for this purpose. Please refer to the European list (Decision N° 2000/532/CE as modified) to identify your appropriate waste number, and ensure national

# 3. LCA: Calculation rules

# 3.1 Declared Unit

1 m<sup>2</sup> (thickness 25 mm) of a PROMALIGHT® 1000X microporous insulation panel

#### Declared unit

Name	Value	Unit
Declared unit	1	m <sup>2</sup>
Gross density	275	kg/m <sup>3</sup>
Layer thickness	0.025	m
Grammage	6.87	kg/m <sup>2</sup>
Conversion factor to 1 kg	0.145	-

Assuming proportionality between the density/thickness/mass of the board and its environmental impact, boards with different densities and/or thicknesses can be calculated using following formula:

$$E = W * \frac{E_{ref}}{W_{ref}}$$

E = environmental impact of a product with density d and thickness t $W = d * t = weight of 1 m^2 product with density d and thickness t$  $E_{ref} = environmental impact of the reference product$  $W_{ref} = weight of 1 m^2 reference product$ 

Some products contain aluminum or PE foil. The impact of these foils is added as an Annex to the EPD. Note that the additional amount of foil covering the side of the boards for larger thicknesses is not significant compared to the amount of foil to cover the bottom and the top side of the board. Therefore, the cover foil can be considered to be independent of thickness and the density.

# 3.2 System boundary

Cradle to gate - with options, including modules A5 (only packaging waste), C1-C4 and D.

The production happens in Belgium and the product is use (and end of life of the product and final product packaging) is valid in the European market.

# 3.3 Estimates and assumptions

No data record for (hydrophobic) fumed silica is available in Ecoinvent. Therefore, a customized model has been used, based on the stoichiometry of the chemical reaction and energy consumption provided by ETEX's supplier. During the production of fumed silica, Hydrogen chloride (HCI) is produced as a co-product. Impacts have been allocated on an economic basis to both end products (fumed silica and HCI).

#### 3.4 Cut-off criteria

The following processes are considered below cut-off:

and/or regional regulations are complied with. Unless wetted, such a waste is normally dusty and so should be properly sealed in containers for disposal. At some authorized disposal sites, dusty waste may be treated differently in order to ensure it is dealt with promptly to avoid them being windblown. Check for any national and/or regional regulations, which may apply.

## 2.16 Further information

Additional information on PROMALIGHT® panels can be found at:

https://www.promat.com/en-gb/industry/products-solutions/high-temperature-insulation/rigid-panels/promalight/

- Transport of packaging of raw materials
- Transport of packaging final product
- Infrastructure and land use of the factory
- Ancillary materials used during the manufacturing
- Environmental impacts caused by the personnel of the production plants are not included in the LCA, e.g. waste from the cafeteria and sanitary installations, accidental pollution caused by human mistakes, or environmental effects caused by commuter traffic. Heating or cooling of the plants in order to ensure a comfortable indoor climate for the personnel for example is also neglected.

More than 95% of materials and energy per module, and more than 99% of the total life cycle materials and energy are included.

## 3.5 Background data

Ecoinvent 3.9.1 and Industry 2.0

# 3.6 Data quality

Company-specific data concern the data about the production of PROMALIGHT® 1000X. All required data about the production process have been delivered to Enperas by ETEX. Enperas uses publicly available generic data for all background processes (Ecoinvent 3.9.1 and Industry 2.0).

The composed datasets for this project are representative and relevant for PROMALIGHT® 1000X panels produced by Microtherm® (part of ETEX group) in Sint-Niklaas, Belgium.

Data are as much as possible representative for the modern state-of-technology. The data collected by ETEX are based on data from the year 2021.

The ETEX production plant purchases hydropower, so the electricity consumption has been modelled using the Ecoinvent 3.9.1 data record 'Electricity, high voltage | electricity production, hydro, reservoir, alpine region | Cut-off, U'. Scoring from 1 to 5 (very good, good, fair, poor, very poor) has been adopted according to the EN 15804+A2:2019 at Annex E (table E.2). The data quality rating (comprising Geographical, technology and temporal aspects) for the identified important materials/processes range from 1,3 to 2,3 and 1,3 to 1,6 for the most relevant primary and generic data respectively.

# 3.7 Period under review

The data collected by ETEX are based on data from the year 2021.

# 3.8 Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product's lifespan: Europe

#### 3.9 Allocation

No co-products are produced. No secondary raw materials are used.

The following allocations have been considered for the production data:

• For the energy consumption specific data per production step was available. The productions steps have been divided in steps that are common to all the products produced in the plant in Sint-Niklaas (i.e. quality control and miscellaneous variants) and steps for which specific data is available for the different products (i.e. mixing, pressing, sawing and shrink-wrapping). The energy consumption of the common production steps have been allocated to the individual product using the total annual production volume of the factory (physical relationship, kg). The energy consumption of the specific steps have been allocated to the individual product using the annual production volume of the respective product (physical relationship, kg). For the total energy consumption the consumption of the common steps per declared unit and the consumption of the specific steps per declared unit of the respective product have been added.

- The amount of raw materials is based on product specific data.
- Only facility level data were available for the production waste. The production waste have been allocated to the individual product using the annual production volume of the factory (physical relationship, kg).
- Only facility level data were available for the packaging of the final product. The total amount of purchased packaging materials were allocated to 1 kg of product using the annual production volume of the products materials (physical relationship, kg).

#### 3.10 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.

The used background database has to be mentioned.

# 4. LCA: Scenarios and additional technical information

#### Characteristic product properties of biogenic carbon

The product does not contain biogenic carbon. Its accompanying packaging contains biogenic carbon in the form of wooden pallets, core boards and carton.

# Information on describing the biogenic Carbon Content at factory gate

Name	Value	Unit
Biogenic carbon content in product	-	kg C
Biogenic carbon content in accompanying packaging	0.163	kg C

Note: 1 kg of biogenic Carbon is equivalent to 44/12 kg of CO2.

#### Module A1-A5

In A1&A2, the amount of raw material and the packaging of raw materials per declared unit, along with the transport mode and distance transported per raw materials have been considered.

In module A3, the site specific foreground data for energy and consumables have been accounted. The production process (in fact the whole plant) uses 100% certified green electricity.

Module A4 is not included in the scope of this study. Only packaging waste is included in module A5. As different applications and installation scenarios can be applied, the installation scenario itself is not included. The European EoL scenarios, based on the PEFCR Annex C, has been used, for the three packaging materials of wood pallets (32% incineration, & 30% Recycling, and rest landfilled), carton (75% recycle, 11% incineration, and rest landfilled) and PE (29% recycle, 32% incineration and rest landfilled).

## End of life (C1 - C4) and Module D

Module C1 is assumed to have zero activity. A 100% landfill scenario is considered as the average European scenario for PROMALIGHT® range. Thus, in C2, a distance of 50 km has been considered for landfill.

No benefits and loads regarding the product are allocated to module D, as the product is 100 % landfilled. However, some minor benefits and loads regarding the packaging of the product are allocated to module D.

Name	Value	Unit
Collected separately waste type waste type	-	kg
Collected as mixed construction waste	6.87	kg
Reuse	-	kg
Recycling	-	kg
Energy recovery	-	kg
Landfilling	6.87	kg

# 5. LCA: Results

Note that only packaging waste is included in module A5. As different applications and installation scenarios can be applied, the installation scenario itself is not included.

= MOD	MODULE NOT RELEVANT)															
Pro	oduct sta	age	-	ruction s stage		Use stage End of life stage							9	Benefits and loads beyond the system boundaries		
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	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
Х	Х	Х	Х	Х	MND	MND	MNR	MNR	MNR	MND	MND	Х	Х	Х	Х	Х
DEGIII	TEOE							ording	EN 1	500/1/	2.1 m/		MALIC	UT@ 10	00¥ mi	croporous

## DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

# RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m^2 PROMALIGHT® 1000X microporous

insulation	panel											
Parameter	Unit	A1-A3	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq	2.31E+01	2.26E+01	2.8E-01	1.81E-01	0	7.92E-01	0	1.02E-01	0	5.07E-02	-4.09E-01
GWP-fossil	kg CO <sub>2</sub> eq	2.34E+01	2.25E+01	2.8E-01	6.56E-01	0	2.3E-01	0	1.02E-01	0	5.06E-02	-2.21E-01
GWP- biogenic	kg CO <sub>2</sub> eq	-4.12E-01	6.32E-02	8.89E-05	-4.76E-01	0	5.61E-01	0	3.28E-05	0	7.23E-05	-1.87E-01
GWP-luluc	kg CO <sub>2</sub> eq	2.96E-02	2.83E-02	1.36E-04	1.21E-03	0	9.17E-06	0	5.02E-05	0	3.09E-05	-2.03E-04
ODP	kg CFC11 eq	1.43E-06	1.41E-06	6.08E-09	1.82E-08	0	5.43E-10	0	2.21E-09	0	1.56E-09	-4.86E-09
AP	mol H⁺ eq	1.02E-01	9.92E-02	9.13E-04	2.17E-03	0	1.08E-04	0	2.22E-04	0	3.27E-04	-7.3E-04
EP- freshwater	kg P eq	1.21E-03	1.18E-03	2.24E-06	2.94E-05	0	2.15E-07	0	8.26E-07	0	1.15E-06	-6.78E-06
EP-marine	kg N eq	1.47E-02	1.38E-02	3.11E-04	5.73E-04	0	4.82E-05	0	5.47E-05	0	1.26E-04	-1.42E-04
EP-terrestrial	mol N eq	1.68E-01	1.59E-01	3.32E-03	5.88E-03	0	4.73E-04	0	5.69E-04	0	1.37E-03	-1.6E-03
POCP	kg NMVOC eq	6.61E-02	6.23E-02	1.36E-03	2.48E-03	0	1.66E-04	0	3.45E-04	0	5.25E-04	-7.16E-04
ADPE	kg Sb eq	1.32E-04	1.3E-04	8.97E-07	9.05E-07	0	5.98E-08	0	3.32E-07	0	1.55E-07	-9.49E-07
ADPF	MJ	4.54E+02	4.31E+02	3.96E+00	1.89E+01	0	2.81E-01	0	1.44E+00	0	1.23E+00	-5.98E+00
WDP	m <sup>3</sup> world eq deprived	8E+00	7.29E+00	1.62E-02	6.96E-01	0	1.75E-03	0	5.95E-03	0	6E-03	-1.06E-01

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

				O DESCRI	BE RESO	URCE US	SE accordi	ng to EN	15804+A2	: 1 m^2 P	ROMALIG	HT®
1000X micr				4.0	• • •		A.5	04	00	00	04	
Parameter	Unit	A1-A3	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	7.6E+01	4.53E+01	6.05E-02	3.07E+01	0	3.33E+00	0	2.23E-02	0	6.43E-02	4.36E-01
PERM	MJ	5.11E+00	8.03E-01	0	4.31E+00	0	-5.11E+00	0	0	0	0	1.74E+00
PERT	MJ	8.11E+01	4.61E+01	6.05E-02	3.5E+01	0	-1.78E+00	0	2.23E-02	0	6.43E-02	2.18E+00
PENRE	MJ	4.45E+02	4.29E+02	3.96E+00	1.21E+01	0	6.64E+00	0	1.44E+00	0	1.23E+00	4.52E-01
PENRM	MJ	8.92E+00	1.27E+00	0	7.65E+00	0	-8.92E+00	0	0	0	0	2.57E+00
PENRT	MJ	4.54E+02	4.31E+02	3.96E+00	1.98E+01	0	-2.28E+00	0	1.44E+00	0	1.23E+00	3.02E+00
SM	kg	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	4.49E-01	2.82E-01	5.29E-04	1.67E-01	0	1.87E-04	0	1.95E-04	0	1.32E-03	-2.02E-03

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRT = Total use of as raw materials; PENRT = Use of non-renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of non-renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

# RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2:

1 m^2 PRO	m <sup>2</sup> 2 PROMALIGH I® 1000X microporous insulation panel														
Parameter	Unit	A1-A3	A1	A2	A3	A4	A5	C1	C2	C3	C4	D			
HWD	kg	1.14E-03	1.09E-03	2.52E-05	2.31E-05	0	1.74E-06	0	9.18E-06	0	5.42E-06	-7.54E-06			
NHWD	kg	2.79E+00	2.26E+00	1.93E-01	3.38E-01	0	2.28E-01	0	7.17E-02	0	6.87E+00	-1.21E-02			
RWD	kg	1.7E-03	1.68E-03	1.29E-06	1.57E-05	0	2.4E-07	0	4.75E-07	0	1.7E-06	-8.12E-06			
CRU	kg	0	0	0	0	0	0	0	0	0	0	0			

MFR	kg	3.82E-02	0	0	3.82E-02	0	1.85E-01	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0	0	0
EEE	MJ	1.04E-01	0	0	1.04E-01	0	4.41E-01	0	0	0	0	0
EET	MJ	2.08E-01	0	0	2.08E-01	0	8.83E-01	0	0	0	0	0

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 m^2 PROMALIGHT® 1000X microporous insulation panel												
Parameter		A1-A3	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
РМ	Disease incidence	6.6E-07	6.08E-07	2.21E-08	2.96E-08	0	1.98E-09	0	7.54E-09	0	7.14E-09	-7.16E-09
IR	kBq U235 eq	2.08E+00	2.05E+00	1.99E-03	2.9E-02	0	2.58E-04	0	7.31E-04	0	2.24E-03	-1.02E-02
ETP-fw	CTUe	1.11E+02	1.05E+02	1.96E+00	4.04E+00	0	1.94E-01	0	7.14E-01	0	4.69E-01	-3.99E-01
HTP-c	CTUh	7.18E-09	6.25E-09	1.27E-10	8.08E-10	0	6.46E-11	0	4.63E-11	0	2.13E-11	-7.87E-11
HTP-nc	CTUh	1.93E-07	1.87E-07	2.79E-09	3.49E-09	0	4.22E-10	0	1.02E-09	0	3.54E-10	-1.41E-09
SQP	SQP	1.11E+02	6.27E+01	2.36E+00	4.6E+01	0	2.54E-01	0	8.73E-01	0	2.19E+00	-8.56E+00

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 – for the indicator "Potential Human exposure efficiency relative to U235". 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 or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators "abiotic depletion potential for non-fossil resources", "abiotic depletion potential for fossil resources", "water (user) deprivation potential, deprivation-weighted water consumption", "potential comparative toxic unit for ecosystems", "potential comparative toxic unit for humans – cancerogenic", "Potential comparative toxic unit for humans - not cancerogenic", "potential soil quality index". The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

# 6. LCA: Interpretation

For PROMALIGHT® 1000X panels produced in Belgium, the raw materials used in the formulation mix has the highest contribution on all impact categories, and more specific the

fumed silica. Module D is not significant as the product is not recycled nor incinerated.

# 7. Requisite evidence

No evidence is required

# 8. References

Standards

#### EN15804

EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

#### EN16757

EN 16757:2017, Sustainability of construction works– Environmental product declarations – Product Category Rules for concrete and concrete elements

#### ISO 9001

ISO 9001:2015: Quality management systems - Requirements

#### ISO 14001

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

#### ISO 14020

ISO 14020:2022: Environmental statements and programme for products

#### ISO 14025

EN ISO 14025:2011, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.

#### ISO 14040

ISO 14040:2006: Environmental management – Life cycle assessment – Principles and framework.

#### ISO 14044

ISO 14044:2006: Environmental management – Life cycle assessment – Requirements and guidelines.

#### ISO 45001

ISO 45001:2018: Occupational health and safety management systems Requirements with guidance for use

#### PCR Part A

Product Category Rules for Building-Related Products and Services Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report according to EN 15804+A2:2019, V1.3, Berlin: Institut Bauen und Umwelt e.V. (IBU), August 2022.

#### PCR Part B

Institut Bauen und Umwelt e.V, Berlin (pub.): PCR Guidance-Texts for Building-Related Products and Services, From the range of Environmental Product Declarations of Institute Construction and Environment e.V. (IBU) : Requirements on the EPD for Mineral insulating materials, v4, 19.07.2023.

#### **Further references**

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#### CPR

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#### **REACH** candidate list

ECHA, REACH Candidate List of substances of very highconcern for Authorisation The literature referred to in the Environmental Product Declaration must be listed in full.Standards already fully quoted in the EPD do not need to be listed here again. The current version of PCR Part A and PCR Part B of the PCR document on which they are based must be referenced.





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