ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	Devilée Insulation
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-DIB-20260195-CBA1-EN
Issue date	15.06.2026
Valid to	14.06.2031

Durafloc/Cyclewool

Devilée Insulation B.V.

Institut Bauen und Umwelt e.V.

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ECO PLATFORM EPD VERIFIED



General Information

Devilée Insulation B.V.

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-DIB-20260195-CBA1-EN

This declaration is based on the product category rules:

Mineral insulating materials, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

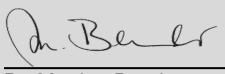
15.06.2026

Valid to

14.06.2031



Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)



Dr. Martina Bender
(Managing Director Institut Bauen und Umwelt e.V.)

Durafloc/Cyclewool

Owner of the declaration

Devilée Insulation
Galjoenweg 5
6222 NS Maastricht
Netherlands

Declared product / declared unit

1 m³ of Durafloc/Cyclewool

Scope:

This EPD is for Durafloc/Cyclewool with an average density of 47.5 kg/m³ which is produced in Maastricht, Netherlands. The LCA is based on the production data for Durafloc/Cyclewool gathered and provided by Devilée Insulation B.V.
The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR
Independent verification of the declaration and data according to ISO 14025:2011
☐ internally ☒ externally



Project manager Rui Wang,
(Independent verifier)

Devilée Insulation

Product

Product description/Product definition

Durafloc/Cyclewool is an insulating material made from 100 % recycled glass wool and is used as a standalone blow-in insulation. The declared lambda value is between 0.034 -0.037 W/m*K and the material has a density of 30-65 kg/m³. The fire class is A1. Durafloc/Cyclewool is produced by breaking the secondary mineral wool from the supplier and granulating it. Afterwards, it is homogenized and filled into bags of 20 kg each.
For the placing of the product on the market in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) the *Regulation (EU) No. 305/2011 (CPR)* applies. The product needs a declaration of performance taking into consideration European Assessment Document *EAD 040729-00-1201*, edition December 2017 – 'Thermal insulation made of loose mineral wool' and the CE-marking.

For the application and use the respective national provisions apply.

Application

Durafloc/Cyclewool is used as a standalone blow-in insulation.

Technical Data

The following values are taken directly from the European Technical Assessment (ETA) document and are valid for Durafloc and Cyclewool and contain all the properties that have to be measured according to the European Assessment Document (EAD) for thermal insulation made of loose mineral wool.

Technical data

Name	Value	Unit
Thermal conductivity	0.034 - 0.037	W/(mK)
Calculation value for thermal conductivity	0.034 - 0.037	W/(mK)
Water vapour diffusion resistance factor	1	-
Gross density	30 - 65	kg/m^3
Formaldehyde emissions acc. to EN 717-1	-	µg/m^3

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to European Assessment Document *EAD 040729-00- 1201*, edition December 2017 – 'Thermal insulation made of loose mineral wool'.

Base materials/Ancillary materials

Durafloc/Cyclewool consists of 100 % recycled glass wool. This product contains substances listed in the candidate list (date: 16.01.2026) exceeding 0.1 percentage by mass: no.

Reference service life

The reference service life is not declared according to *ISO 15686*. However, the service life according to the BBSR table as well as provided by the manufacturer is >50 years.

LCA: Calculation rules

Declared Unit

The declared unit is 1 m³ with an average density of 47,5 kg/m³. In order to scale the results to a declared unit of 1 kg, multiply each of the results by the conversion factor of 1/47,5 (= 0,0211).

Declared unit and mass reference

Name	Value	Unit
Declared unit	1	kg
Gross density	47.5	kg/m^3
conversion factor	0.0211	-

The production data was measured directly by Devilée. Any data that covers production processes uses either Dutch or European datasets. As the primary market is Germany, the end-of-life treatment of the product is covered with datasets that are either representative for Germany or the European market.

System boundary

Type of EPD: cradle to gate with options including the modules A4, A5, C1-C4 and module D.
For the environmental impact, the use of green electricity during production was calculated, taking into account the residual mix for the remaining electricity. The proportion of electricity demand covered by green electricity in the total electricity demand of the company is 100 %. It is covered by self-generated solar electricity (0,08 kg CO_2e/kWh) and renewable electricity from the grid (0,02 kg CO_2e/kWh).

Module A1-A3 include gathering, preparing and packaging of the secondary mineral wool. A4 includes the transport to the installation site with an assumed distance of 100 km. A5 includes blowing in the mineral wool fibres and treatment of the packaging waste. C1 includes the demolition which is only taking into account manual labour. C2 considers the transport to either the recycling or the landfilling site, depending on the considered scenario. C3 includes recycling of the mineral wool (if applicable in the selected scenario), whereas C4 covers landfilling the mineral wool (if applicable in the selected scenario). Module D includes credits from energy recovery due to the incineration of packaging material.

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

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. All the background data comes from the *Ecoinvent* database version 3.11 with the *EN 15804*-addon by *Greendelta*. All calculations were made with *OpenLCA* 2.5.0

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

The product does not contain any biogenic carbon. Biogenic carbon in the packaging can be found in the paper label and

the EU flat pallet used for transportation.

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	0.0062	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

The following tables report details regarding the various considered life cycle modules.

Transport to the building site (A4)

Name	Value	Unit
Litres of fuel	4.36	l/100km
Transport distance	100	km
Capacity utilisation (including empty runs)	61	%
Gross density of products transported	47.5	kg/m^3

The above fuel consumption applies per ton transported. The utilization is calculated from the average utilization in tons andthe total weight of the vehicle. Both values are taken from thecorresponding transport data set in the Ecoinvent database.

Installation into the building (A5)

Name	Value	Unit
Electricity consumption	0.67	kWh

The life span is based on the *BBSR* table but is in accordance to the manufacturer information.

Reference service life

Name	Value	Unit
Life Span (according to BBSR)	50	a
Life Span according to the manufacturer	50	a

End of life (C1 - C4)

Two separate scenarios are considered. In scenario 1, the fibers are 100 % recycled, whereas scenario 2 includes 100 % landfilling of Durafloc/Cyclewool. The transport distance in module C2 is assumed to be 100 km to allow scalability of the results to the actual distance.
As there are two scenarios considered. The modules C3 and C4 are declared twice. Default scenario 1 (Recycling) is declared by modules C3 and C4. Scenario 2 (landfilling) is declared by modules C3/1, C4/1. Module C2 and module D are the same for both scenarios.

Name	Value	Unit
Collected separately waste type insulation materials	47.5	kg
Recycling Scenario 1 (Default)	47.5	kg
Landfilling Scenario 2	47.5	kg

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

Name	Value	Unit
Incineration packaging	0.18	kg

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LCA: Results

Results below are per m³ which equals 2.375 bags of Durafloc/Cyclewool

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

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	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
X	X	X	X	X	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m³ Durafloc/Cyclewool

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C3/1	C4	C4/1	D
GWP-total	kg CO_2 eq	2.46E+00	4.87E-01	1.93E+00	0	4.84E-01	1.5E+00	0	0	8.48E-01	-1.22E+00
GWP-fossil	kg CO_2 eq	2.49E+00	4.87E-01	1.89E+00	0	4.83E-01	1.5E+00	0	0	8.47E-01	-1.22E+00
GWP-biogenic	kg CO_2 eq	-3.74E-02	3.09E-04	4.1E-02	0	3.06E-04	1.82E-03	0	0	4.86E-04	8.28E-04
GWP-luluc	kg CO_2 eq	2.05E-03	1.81E-04	6.48E-05	0	1.8E-04	5.33E-04	0	0	3.6E-04	-1.17E-04
ODP	kg CFC11 eq	7.44E-08	1.1E-08	7.44E-09	0	1.1E-08	3.4E-08	0	0	2.04E-08	-2.78E-08
AP	mol H^+ eq	9.18E-03	1.18E-03	1.81E-03	0	1.17E-03	1.02E-02	0	0	4.61E-03	-2.76E-03
EP-freshwater	kg P eq	6.03E-04	3.56E-05	3.13E-04	0	3.54E-05	1.28E-04	0	0	6.5E-05	-4.61E-04
EP-marine	kg N eq	1.89E-03	3.11E-04	4.77E-04	0	3.09E-04	4.32E-03	0	0	1.79E-03	-7.03E-04
EP-terrestrial	mol N eq	1.99E-02	3.37E-03	4.76E-03	0	3.35E-03	4.72E-02	0	0	1.95E-02	-7.02E-03
POCP	kg NMVOC eq	1.2E-02	1.98E-03	1.31E-03	0	1.97E-03	1.53E-02	0	0	6.95E-03	-2.29E-03
ADPE	kg Sb eq	2.97E-05	1.45E-06	2.69E-06	0	1.44E-06	3.08E-06	0	0	2.29E-06	-4.09E-06
ADPF	MJ	5.31E+01	7.39E+00	7.01E+00	0	7.33E+00	2.4E+01	0	0	1.52E+01	-1.63E+01
WDP	m^3 world eq deprived	2.82E+00	4.29E-02	7.96E-02	0	4.26E-02	4.15E-01	0	0	3.64E-01	-8.51E-02

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)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m³ Durafloc/Cyclewool

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C3/1	C4	C4/1	D
PERE	MJ	2.08E+01	1.14E-01	1.05E-01	0	1.13E-01	4.89E-01	0	0	2E-01	-1.23E-01
PERM	MJ	4.01E-02	0	-4.01E-02	0	0	0	0	0	0	0
PERT	MJ	2.08E+01	1.14E-01	6.52E-02	0	1.13E-01	4.89E-01	0	0	2E-01	-1.23E-01
PENRE	MJ	3.57E+01	7.39E+00	2.45E+01	0	7.33E+00	2.4E+01	0	0	1.52E+01	-1.63E+01
PENRM	MJ	1.75E+01	0	-1.75E+01	0	0	0	0	0	0	0
PENRT	MJ	5.31E+01	7.39E+00	7.01E+00	0	7.33E+00	2.4E+01	0	0	1.52E+01	-1.63E+01
SM	kg	4.78E+01	6.71E-03	2.85E-03	0	6.67E-03	3.01E-02	0	0	1.1E-02	-6.07E-03
RSF	MJ	1.78E-01	1.43E-03	7.68E-04	0	1.42E-03	9.89E-03	0	0	2.46E-03	-2.08E-03
NRSF	MJ	0	0	0	0	0	0	0	0	0	0
FW	m^3	6.59E-02	9.97E-04	1.34E-03	0	9.9E-04	9.6E-03	0	0	8.54E-03	-1.96E-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; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total 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 net fresh water

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 m³ Durafloc/Cyclewool

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C3/1	C4	C4/1	D
HWD	kg	8.27E-02	7.67E-03	1.44E-02	0	7.62E-03	2.62E-02	0	0	1.4E-02	-9.48E-03
NHWD	kg	8.08E+00	7.11E-02	5.3E-01	0	7.06E-02	2.61E-01	0	0	4.77E+01	-1.34E-01
RWD	kg	3.94E-05	2.03E-06	5.05E-06	0	2.02E-06	1.05E-05	0	0	3.48E-06	-7.97E-06
CRU	kg	0	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	2E+01	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	1.48E+00	0	0	0	0	0	0	0

EET	MJ	0	0	2.95E+00	0	0	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 m³ Durafloc/Cyclewool

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C3/1	C4	C4/1	D
PM	Disease incidence	1.52E-07	4.83E-08	6.41E-09	0	4.8E-08	6.09E-07	0	0	4.55E-07	-9.91E-09
IR	kBq U235 eq	1.57E-01	8.27E-03	1.72E-02	0	8.21E-03	4.19E-02	0	0	1.42E-02	-2.75E-02
ETP-fw	CTUe	1.19E+01	8.66E-01	1.26E+00	0	8.59E-01	2.16E+00	0	0	1.57E+00	-1.67E+00
HTP-c	CTUh	6.96E-10	8.1E-11	1.11E-10	0	8.05E-11	2.91E-10	0	0	1.95E-10	-1.53E-10
HTP-nc	CTUh	3.33E-08	4.75E-09	6.48E-09	0	4.72E-09	8.54E-09	0	0	6.76E-09	-7.15E-09
SQP	SQP	2.47E+01	7.42E+00	7.57E-01	0	7.37E+00	2.16E+01	0	0	2.02E+01	-1.16E+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.

References

Standards

CEN/TR 15941
CEN/TR 15941:2010-03: Nachhaltigkeit von Bauwerken - Umweltproduktdeklarationen - Methoden für Auswahl und Verwendung von generischen Daten; Deutsche Fassung (CEN/TR 15941:2010)

DIN EN 15804
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DIN EN ISO 14040
DIN EN ISO 14040:2006-10, Umweltmanagement - Ökobilanz - Grundsätze und Rahmenbedingungen (EN ISO 14040:2006); Deutsche und Englische Fassung EN ISO 14040:2006

DIN EN ISO 14044
DIN EN ISO 14044:2006-10, Umweltmanagement - Ökobilanz - Anforderun-gen und Anleitungen (ISO 14044:2006); Deutsche und Englische Fassung EN ISO 14044:2006

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Further References

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PCR Part A
PCR Part A: Calculation rules for the life cycle assessment and requirements of the project report according to EN 15804+A2:2019 (v. 1.4, 14.04.2024)

PCR Part B
PCR Part B: Requirements on the EPD for Mineral insulating materials (v.11 from August 1st, 2024)

REACH Regulation
REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation,Authorisation and Restriction of Chemicals

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