

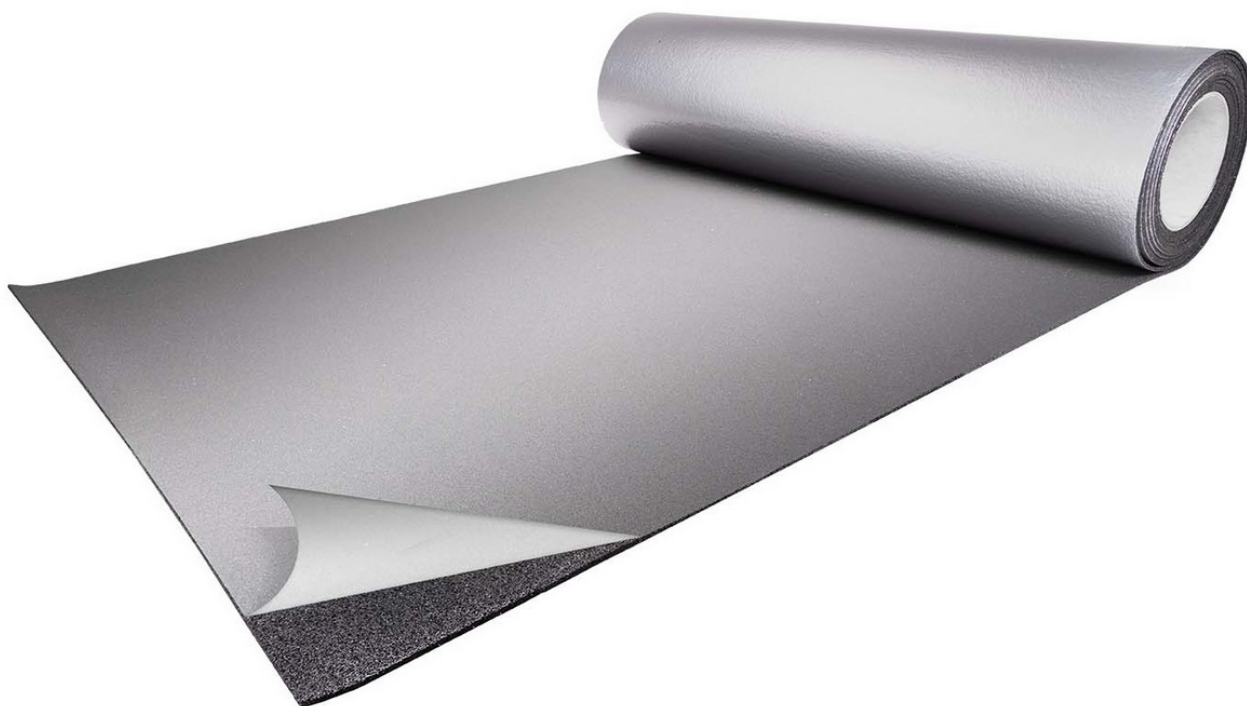
ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	REGUPOL Germany GmbH & Co. KG.
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-REG-20250757-IBA1-EN
Issue date	07.07.2026
Valid to	06.07.2031

REGUPOL laminated/coated sheet material (in rolls)
REGUPOL Germany GmbH & Co. KG

www.ibu-epd.com | <https://epd-online.com>



1. General Information

REGUPOL Germany GmbH & Co. KG

Programme holder

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

Declaration number

EPD-REG-20250757-IBA1-EN

This declaration is based on the product category rules:

Floor coverings, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

07.07.2026

Valid to

06.07.2031



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



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

REGUPOL laminated/coated sheet material (in rolls)

Owner of the declaration

REGUPOL Germany GmbH & Co. KG.
Am Hilgenacker 24
57319 Bad Berleburg
Germany

Declared product / declared unit

1 m² of coated REGUPOL sheet material (in rolls), with an average weight per unit area of 0.89 kg/m' and a thickness of 1 mm. This is an average EPD.

Scope:

Production at REGUPOL Germany GmbH & Co. KG's site in Bad Berleburg.

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 evidence.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard is abbreviated 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

☐

internal

☒

external



Dr. Marco Muhl,
(Independent verifier)

2. Product

2.1 Product description/Product definition

REGUPOL laminated/coated sheet material (in rolls) is a soft, elastic floor covering, made mainly from recycled rubber, which is coated. The trade names covered by the EPD can be found in Annex A to the EPD. The LCA results are linearly dependent on the thickness (mm) of the sheets. The use of REGUPOL laminated/coated sheet material (in rolls) is subject to the relevant national regulations in force at the place of use; in Germany, for example, this includes products approved by the building authorities (bearing the CE mark) and the technical specifications based on these regulations.

2.2 Application

REGUPOL laminated/coated sheet material (in rolls) is used to protect flat roofs, as surfacing to increase the sliding coefficient of friction (load securing), as a functional/exposed surface in sports /fitness facilities, as flooring for indoor and outdoor use, and for decoupling buildings (vibration isolation).

2.3 Technical data

Structural data

Name	Value	Unit
Product thickness	2.5 - 32	mm
Density	400 - 1377	kg/m ³
Product Form	Bahn / Platte	-
Grammage average weight per unit area per 1 mm layer thickness	889	g/m ²

Information such as performance data, test results, descriptions, etc. can be viewed on the REGUPOL website for the relevant products in the following areas:

- Sports: <https://sports.regupol.de>
- Acoustics: <https://acoustics.regupol.de/>
- Load securing: <https://loadsecuring.regupol.de/>
- Building conservation: <https://construction.regupol.de/>

Product information is also available from the sales departments.

2.4 Delivery status

REGUPOL laminated/coated sheet material (in rolls) is supplied in rolls on pallets or laminated/coated sheet material (in rolls) is supplied on pallets. The height of the stationary rolls is between 1.000 mm and 1.630 mm (corresponding to the track width). Non-standard sizes are available on request (applies to narrower widths).

2.5 Base materials/auxiliary materials

REGUPOL laminated/coated sheet material (in rolls), is composed as follows: Approx. 10.1% polyurethane (PU) binder, approx. 86.8% recycled materials (rubber/foams, styrene-butadiene rubber (SBR) and production residues), approx. 0.1% virgin material (ethylene-propylene-diene monomer (EPDM), colour powder and flame retardant), approx. 3.1% laminating materials and adhesives.

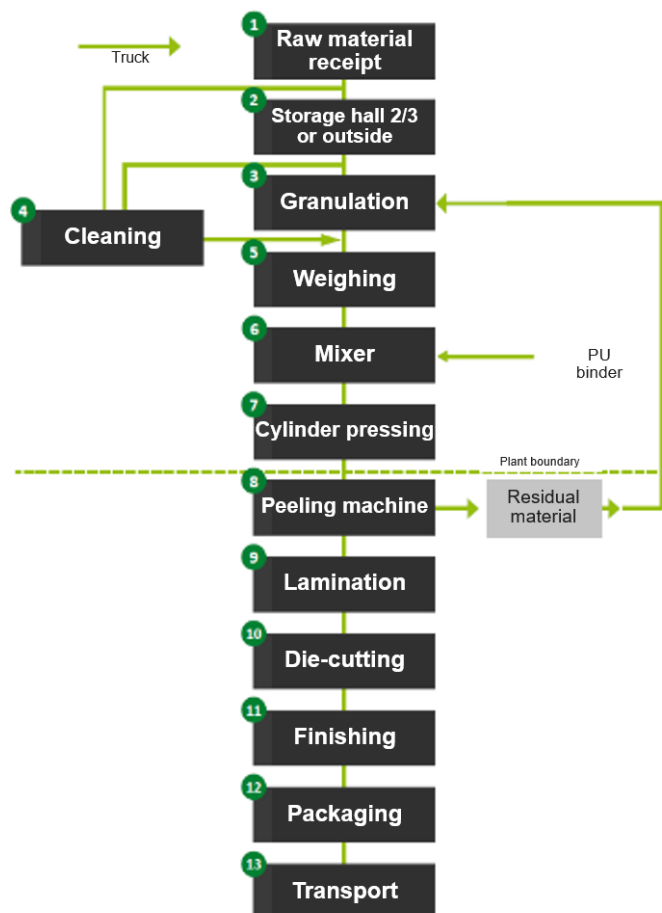
1) Does the product/article/at least one component of the product contain substances from the ECHA list of Substances of Very High Concern (SVHC) eligible for authorisation (date: 2 December 2022) in concentrations exceeding 0.1% by mass? No.

2) Does the product/article/at least one sub-assembly contain any other CMR substances in Category 1A or 1B that are not

on the Candidate List, in concentrations exceeding 0.1% by mass in at least one sub-assembly: no.

3) Biocidal products have been added to this construction product, or it has been treated with biocidal products (it is therefore a treated article within the meaning of the Biocidal Products Regulation (EU) No 528/2012): no.

2.6 Manufacture



REGUPOL operates a quality management system that is certified to (ISO 9001).

2.7 Environment and health during manufacturing

REGUPOL has carried out the necessary risk assessments to ensure health and safety during the manufacturing process and to guarantee compliance with the relevant legislation. Risks are prioritised using a risk matrix; the probability of occurrence and the extent of damage are combined to produce a risk priority score. The annual training requirement is met in full; supervisors train staff in the correct use of, for example, machinery. Attention is also drawn to the specific hazards, and all staff receive further training via an internal e-learning programme.

REGUPOL's occupational health and safety management system is certified to (ISO 45001, AMS).

At **REGUPOL**, production offcuts are shredded and returned to the production cycle; the overarching aim is therefore to prevent waste during production. REGUPOL operates an environmental management system (certified to ISO 14001) and an energy management system (certified to ISO 50001).

2.8 Product processing/Installation

REGUPOL laminated/coated sheet material (in rolls) are either loosely laid or bonded.

2.9 Packaging

REGUPOL laminated/coated sheet material (in rolls) is packed onto wooden Euro pallets using polypropylene (PP) adhesive tape and stretch film. Pallets are usually reused several times, and the polypropylene packaging can also be recycled.

2.10 Condition of use

Based on the current state of the art, it can be assumed that, when used correctly, the **REGUPOL laminated / coated** sheet material (in rolls) will remain unchanged throughout its service life, as will its material composition.

2.11 Environment and health during use

REGUPOL laminated/coated sheet material (in rolls) does not contain any substances that are released from the product under normal use. Neither the environment nor the health of users is adversely affected during the period of use. There are no known emissions into the environment.

2.12 Reference service life

This EPD covers modules A1—A3, C and D (cradle-to-gate, with options). The service life corresponds to typical use in the relevant application.

2.13 Extraordinary effects

Fire

Information on fire safety can be found on our website under the relevant products or in the product information, which can be requested from our sales departments.

Fire safety

Name	Value
Building material class	Efl (easy flammable)
Smoke gas development	Not tested, as it is only relevant from building material class Dfl onwards
Burning droplets	Not relevant for floor coverings

Water

No environmental impact is to be expected in the event of unforeseen exposure to water, as the material is suitable for and is used in outdoor applications.

Mechanical destruction

In the event of mechanical damage, no environmental hazards are to be expected.

2.14 Re-use phase

In principle, it is possible to reuse or recycle **REGUPOL laminated/coated** sheet material (in rolls). An established product take-back scheme is in place, and material streams declared as waste may be accepted (see REG_Ruecknahmeformular.pdf, which is available on the **REGUPOL** website). (regupolde-lac24.kxcdn.com/fileadmin/user_upload/corporate_website/documents/de/REG_Return_Form.pdf)

2.15 Disposal

REGUPOL places great importance on reusability in accordance with ELT (end of lifetime) right from the product design stage. The product can therefore, in theory, be 100 % recycled, provided it is free from foreign matter and other contaminants.

Once it has been used, the product is to be classified as non-hazardous waste.

In accordance with **Directive 2008/98/EC** and **Decision 2000/532/EC**, in conjunction with the Regulation on the **European Waste Catalogue (Waste Catalogue Regulation - AVV)**, waste code **17 02 13 plastic** must be used for disposal. The product can be sent for thermal recovery with energy recovery.

2.16 Further information

Further information about the company and its other products can be found on the website: www.regupol.de

3. LCA: Calculation rules

3.1 Declared unit

To determine the environmental impact, 1 m² **REGUPOL laminated/coated** sheet material (in rolls), with an average weight per unit area of 0.89 kg/m² and a thickness of 1 mm was selected. The choice of thickness is justified by the fact that it makes it easier for the customer to extrapolate the environmental impact to the thickness ordered. There is no standard thickness, as this depends on the customer's requirements. This is an average EPD.

In order to calculate the average proportion of materials used, all materials used for **REGUPOL** sheet material (in rolls) over the course of the year were taken into account, weighted as a percentage per m² of sheet material (in rolls). There is no 'standard formula', as **REGUPOL** manufactures the product to the customer's specifications.

The declared units and the typical range for **REGUPOL laminated / coated** sheet material (in rolls) in terms of bulk density are shown below.

Declared unit and mass reference

Name	Value	Unit
Declared unit	1	m ²
Layer thickness	0.001	m
Grammage average	0.89	kg/m ²
Bulk density declared unit	890	kg/m ³
Gross density range	400 - 1377	kg/m ³

3.2 System boundary

EPD type: Cradle-to-factory-gate with options, modules C1—C4 and module D. The following modules were taken into account when calculating the life cycle assessment:

A1: Raw material supply A2: Transport
A3: Manufacturing A5: Assembly C1: Dismantling / Demolition
C2: Transport C3: Waste treatment C4: Disposal
D: Potential for reuse, recovery and recycling

This includes all raw materials and the packaging required for these raw materials, as well as the process costs involved in processing the recyclates, under A1. The manufacture of the packaging materials for the product is also included under A1. Furthermore, all energy sources and the required water consumption are taken into account in A3. The German residual

electricity mix used here was taken into account using an emission factor of 0.879 kg CO₂-e / kWh. The transport of raw materials to the production site is assigned to A2. The material is processed practically waste-free during production, as potential waste is internally recycled back into the production process. For this reason, there are no losses (e.g. during the start-up phase of the plants or during production) that need to be taken into account in the calculations. For the disposal of plastic packaging and non-reusable pallets used to package the product (Module A5), it is assumed that each will be incinerated at a waste-to-energy plant.

Module C1 is declared but classified as irrelevant, as REGUPOL sheet flooring is generally removed by hand or using small floor-stripping machines and therefore produces no emissions or only minimal emissions. Module C4 is also declared, but is classified as irrelevant, as the entire floor covering can be reused in another form and will not be sent to landfill.

The use phase is not taken into account in life cycle assessment calculations. It is assumed that no environmental impacts will occur during use.

All energy recovery (electricity and heat) resulting from the thermal recovery of the product, but occurring outside the product system under consideration, is declared in Module D. Germany's grid mix was used as the basis for all environmental impacts resulting from electricity recovery (Module D).

3.3 Estimates and assumptions

Primary data on all forms of delivery were used for the transport of input materials and for production processes on site at **REGUPOL Germany GmbH & Co. KG**. (module A3). Generic data was used for the production of the input products (Module A1), as these are not produced by REGUPOL Germany GmbH & Co. KG itself and no detailed information was available. For the processing of the recycled materials used (rubber/foams and SBR rubber in Module A1, an energy consumption of 0.0446 kWh/kg (shredding) was assumed.

Transports for end-of-life disposal (Module C2, 50 km, utilisation rate 55 %) were selected as assumptions.

Credits for the avoided generation of electricity and steam in another production system as a result of the incineration processes involving production waste were also taken into account (Module D). The assumption here was 100% combustion including energy recovery (electricity and steam).

3.4 Cut-off criteria

All primary data relating to the production processes were taken into account. No cut-off rules were used.

3.5 Background data

4. LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

The product packaging consists of plastic (PP) containing no bio-based content and reusable pallets, which account for less than 0.1 % by mass of the product.

The biogenic carbon content of the product is primarily attributable to natural rubber, a share of which is incorporated via the reuse of end-of-life tyres. Consequently, a negative value is reported in Module A1 and is balanced in Modules C3 and C3/1.

Information on the measurement of biogenic carbon content at the factory gate

The LCA For Experts software system (*LCA FE, version 2025.1*), developed by Sphera, was used to model the LCA of the product. The data sets included are taken from Sphera's Managed LCA Content database (*MLC, 2025.1*). Data gaps were filled exclusively using the *Ecoinvent database* (v 3.10) cited in *LCA FE*.

3.6 Data quality

The data quality can be regarded as high, as suitable data sets were available for the majority of the preliminary products used. In addition, a large amount of primary data (reference year 2024) was taken into account. The calculations contain only a few assumptions and estimates. The technological basis of the data collected reflects the current state of the art. The datasets used (data period: 2016-2024) are complete and comply with the system boundaries and the criteria for the exclusion of inputs and outputs.

The production process is the same for uncoated web material across all thicknesses and grammages. Production always takes place at the **REGUPOL Germany GmbH & Co. KG** site in Bad Berleburg/Raumland.

3.7 Period under review

The period under review is 2024. All company-specific data was collected during this period and used for the life cycle assessment.

3.8 Geographic representativeness

Country or region in which the declared product system is manufactured, used or handled at the end of the product's life span: Germany

3.9 Allocation

Only the expenses for processing are taken into account for the recycles used in Module A1, as this is waste before use (pre-consumer material, rubber and foams) or post-consumer waste (post-consumer material, SBR rubber) in accordance with *ISO 14021*. No by-products are generated during the manufacture of **REGUPOL laminated/coated** sheet material (in rolls), which is why no allocation was required.

All credits from recovered energy from production waste incineration processes were allocated to module D.

3.10 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all data sets to be compared were created according to *EN 15804* and the building context and product-specific performance characteristics are taken into account. The background data used is taken from the LCA for Experts software (SP 2025.1.).

Data gaps were filled using the *Ecoinvent database* (v.3.10) cited in *LCA FE*.

Name	Value	Unit
Biogenic carbon content in product	0.15	kg C
Biogenic carbon content in accompanying packaging	0.0006	kg C

Assembly (A5)

Module A5 takes into account the environmental impacts associated with the disposal of product packaging.

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

End of life (C1-C4)

The transport distance to the disposal site is 50 km. For the end of the life cycle, 100% incineration(waste incineration plant with an R1 value > 0.6) with energy recovery(Module C3) is taken into account. Under German conditions, the incineration of these products results in energy credits, which are covered in Module D. The '100% recycling' scenario is not relevant in modules C3/1 and D/1, as it involves material recycling, and is therefore set to zero.

Name	Value	Unit
Recycling 100% incineration	-	kg
Energy recovery 100 % incineration	0.89	kg
Recycling Scenario 100% Recycling	0,89	kg
Energy recovery Scenario 100% Recycling	-	kg

Reuse, recovery and recycling potential (D), relevant scenario details

Name	Value	Unit
Incineration material	0,89	kg
R1-Factor MVA	> 60	%

Module D includes energy recoveries from the incineration processes (i.e., electricity and steam from product and packaging incineration). These are done using German average data for electrical and thermal energy recoveries. The 100% recycling scenario (D/1) does not include any credits.

5. LCA: Results

The following tables show the environmentally relevant results in accordance with *EN 15804* (characterisation factors from EF3.1) for the declared unit of 1 m² **Regupol laminated/coated** sheet material (in rolls), with an average mass per unit area of 0.89 kg/m² and a thickness of 1 mm. The main scenario assumes 100 % incineration at the end of the product's life, whilst the alternative scenario (C3/1 and D/1) assumes 100 % recycling. This makes it possible to calculate the future recycling rates actually achieved and the associated climate impacts.

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	MND	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 m² Regupol Bahnenware kaschiert / beschichtet

Parameter	Unit	A1	A2	A3	A5	C1	C2	C3	C3/1	C4	D	D/1
GWP-total	kg CO ₂ eq	-2.03E-01	4.13E-02	3.66E-03	2.51E-02	0	9.65E-03	2.32E+00	5.68E-01	0	-1.5E+00	0
GWP-fossil	kg CO ₂ eq	3.47E-01	4.08E-02	3.66E-03	2.39E-02	0	9.36E-03	1.77E+00	1.81E-02	0	-1.49E+00	0
GWP-biogenic	kg CO ₂ eq	-5.51E-01	7.65E-05	-7.67E-05	1.24E-03	0	4.46E-05	5.5E-01	5.5E-01	0	-1.05E-02	0
GWP-luluc	kg CO ₂ eq	9.28E-05	4.3E-04	-1.26E-06	2.2E-06	0	2.43E-04	5.25E-05	1.48E-05	0	-6.1E-04	0
ODP	kg CFC11 eq	5.07E-11	6.93E-15	-1.69E-13	8.56E-15	0	2.64E-15	2.93E-13	5.01E-13	0	-2.25E-11	0
AP	mol H ⁺ eq	5.36E-04	8.4E-05	5.33E-06	4.97E-06	0	1.36E-05	3.18E-04	3.13E-05	0	-1.67E-03	0
EP-freshwater	kg P eq	1.1E-06	1.13E-07	-1.55E-08	1.16E-09	0	1.79E-08	6.34E-08	5.29E-08	0	-2.22E-06	0
EP-marine	kg N eq	1.54E-04	3.65E-05	1.65E-06	1.31E-06	0	5.36E-06	6.54E-05	9.64E-06	0	-5.82E-04	0
EP-terrestrial	mol N eq	1.56E-03	3.91E-04	1.72E-05	2.36E-05	0	5.97E-05	1.5E-03	1.07E-04	0	-6.44E-03	0
POCP	kg NMVOC eq	5.66E-04	7.59E-05	6.01E-06	3.52E-06	0	1.27E-05	1.75E-04	2.15E-05	0	-1.44E-03	0
ADPE	kg Sb eq	4.03E-08	2.78E-09	-1.24E-09	8.3E-11	0	1.26E-09	2.88E-09	3.77E-09	0	-1.79E-07	0
ADPF	MJ	9.55E+00	5.35E-01	3.78E-03	1.23E-02	0	1.22E-01	4.23E-01	2.44E-01	0	-2.09E+01	0
WDP	m ³ world eq deprived	7.27E-02	1.91E-04	-7.44E-05	2.39E-03	0	3.6E-05	2.56E-01	4.61E-04	0	-1.78E-02	0

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 m² Regupol Bahnenware kaschiert / beschichtet

Parameter	Unit	A1	A2	A3	A5	C1	C2	C3	C3/1	C4	D	D/1
PERE	MJ	4.94E-01	4.03E-02	-6.83E-02	1.07E-02	0	1.06E-02	1.31E-01	0	0	-9.13E+00	0
PERM	MJ	6.87E-03	0	0	-6.87E-03	0	0	0	0	0	0	0
PERT	MJ	5.01E-01	4.03E-02	-6.83E-02	3.87E-03	0	1.06E-02	1.31E-01	0	0	-9.13E+00	0
PENRE	MJ	9.35E+00	5.35E-01	3.78E-03	3.8E-01	0	1.22E-01	3.47E+00	2.44E-01	0	-2.09E+01	0
PENRM	MJ	3.42E+00	0	0	-3.67E-01	0	0	-3.05E+00	-3.05E+00	0	0	0
PENRT	MJ	1.28E+01	5.35E-01	3.78E-03	1.23E-02	0	1.22E-01	4.23E-01	-2.81E+00	0	-2.09E+01	0
SM	kg	7.71E-01	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 ³	2.69E-03	1.99E-05	-1.21E-07	5.72E-05	0	7.51E-06	1.3E-05	7.85E-05	0	-2.83E-03	0

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 m² Regupol Bahnenware kaschiert / beschichtet

Parameter	Unit	A1	A2	A3	A5	C1	C2	C3	C3/1	C4	D	D/1
-----------	------	----	----	----	----	----	----	----	------	----	---	-----

HWD	kg	4.82E-05	2.15E-11	-1.45E-10	8.25E-12	0	6.39E-12	8.25E-12	4.77E-10	0	-1.95E-08	0
NHWD	kg	4.7E-03	7.47E-05	-3.71E-05	2.29E-03	0	1.82E-05	2.29E-03	2.16E-04	0	-1.2E-02	0
RWD	kg	1E-04	1.01E-06	-1.44E-06	3.81E-07	0	1.77E-07	3.81E-07	2.22E-05	0	-5.02E-04	0
CRU	kg	0	0	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	8.89E-01	0	0	-8.89E-01
MER	kg	0	0	0	0	0	0	8.89E-01	0	0	-8.89E-01	0
EEE	MJ	-4.06E-02	0	-2.5E-03	4.31E-02	0	0	5.06E+00	0	0	-5.06E+00	0
EET	MJ	-9.38E-02	0	-5.7E-03	9.96E-02	0	0	1.16E+01	0	0	-1.16E+01	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 m² Regupol Bahnenware kaschiert / beschichtet

Parameter	Unit	A1	A2	A3	A5	C1	C2	C3	C3/1	C4	D	D/1
PM	Disease incidence	4.58E-09	6.83E-10	9.27E-11	4.94E-11	0	1.16E-10	2.78E-09	2.44E-10	0	-1.22E-08	0
IR	kBq U235 eq	1.03E-02	1.45E-04	-2.9E-04	3.82E-05	0	1.75E-05	1.31E-03	2.23E-03	0	-6.26E-02	0
ETP-fw	CTUe	3.73E+00	6.96E-01	3.33E-03	4.71E-03	0	1.35E-01	1.71E-01	6.76E-02	0	-2.8E+00	0
HTP-c	CTUh	1.97E-10	9.39E-12	-9.28E-13	3.7E-13	0	1.94E-12	1.35E-11	4.83E-12	0	-2.02E-10	0
HTP-nc	CTUh	3.17E-09	5.25E-10	-9.01E-12	2.79E-11	0	7.51E-11	1.42E-10	1.28E-10	0	-5.36E-09	0
SQP	SQP	4.7E-01	2.36E-01	-4.02E-02	3.46E-03	0	6.41E-02	1.38E-01	1.41E-01	0	-5.61E+00	0

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 (carcinogenic); HTP-nc = Potential comparative toxic unit for humans (not carcinogenic); 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 – carcinogenic”, “Potential comparative toxic unit for humans - not carcinogenic”, “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.

This EPD was created using a software tool.

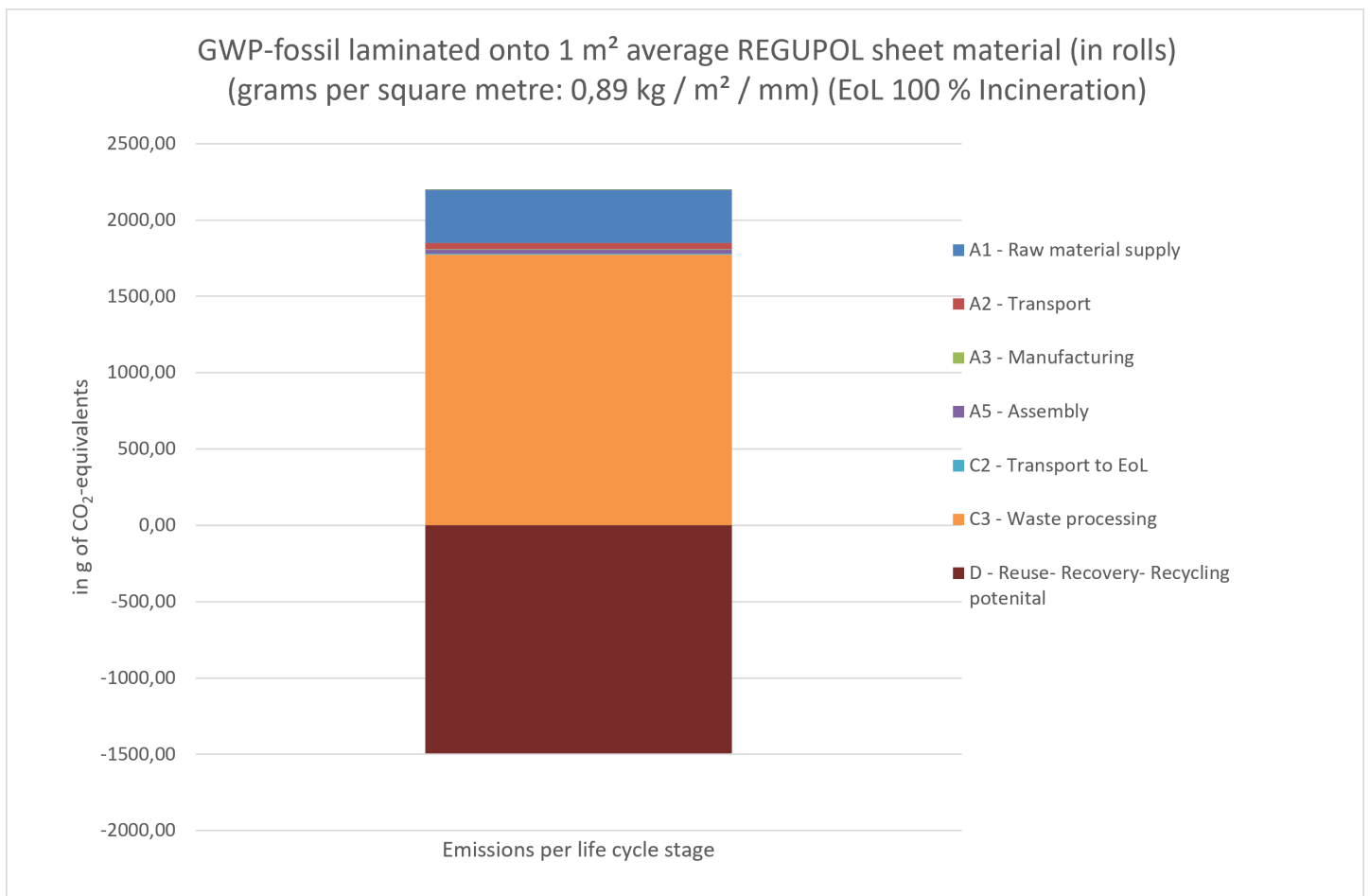
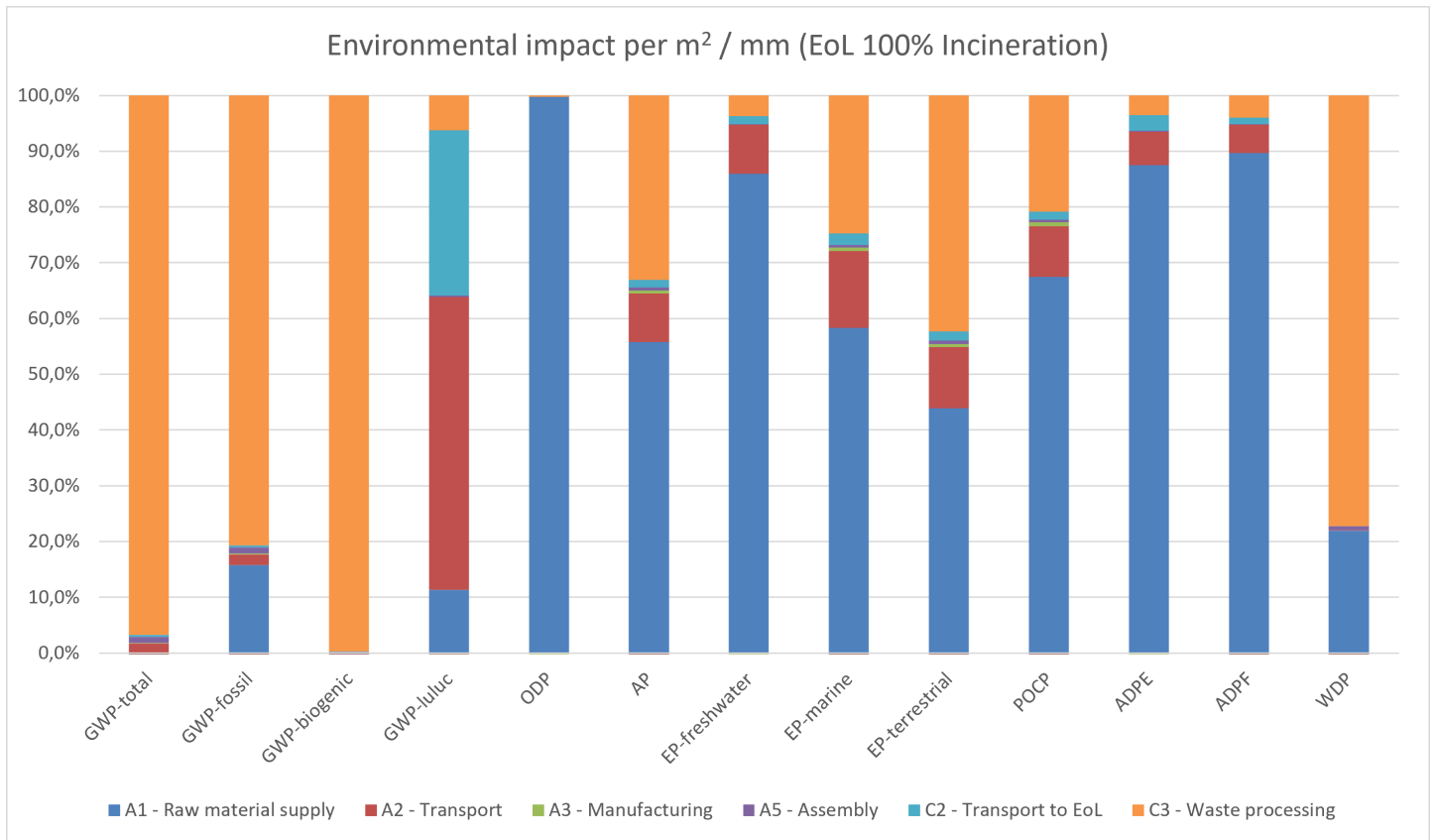
6. LCA: Interpretation

The product is evaluated below for an average surface density of 0.89 kg / m².

With regard to environmental impacts, the impact categories 'GWP-biogenic' include the Global Warming Potential, Ozone Depletion Potential (ODP), Acidification Potential of Soil and Water (AP), Eutrophication Potential, Freshwater (EP-freshwater), eutrophication potential for marine ecosystems (EP-marine), eutrophication potential for terrestrial ecosystems (EP-terrestrial), tropospheric ozone formation potential (POCP), potential for the depletion of abiotic resources — non-fossil resources (ADPe) and potential for the depletion of abiotic resources - fossil fuels (ADPf) are significantly influenced by the supply of raw materials (Module A1) and waste processing (C3). In most impact categories, the main driver amongst the raw material (module A1 is the binder material used. 100% incineration scenario: For the impact categories 'Total Global Warming Potential (GWP total)', 'Fossil GWP' and 'Biogenic GWP', the influence of waste treatment (C3) predominates. Land use (GWP-luluc) is influenced by the resulting emissions from the transport of input materials (A2) and transport to the end of life (C2). Transport processes

(Modules A2 and C2 (with the exception of GWP-luluc)) and the disposal of packaging materials (Module A5) have a minor impact on the impact categories compared with the other modules. Furthermore, the separate assessment of energy recovery (Module D) results in credits across all impact categories, with the credits for the categories 'Total GWP', 'Fossil GWP', 'Biogenic GWP' and 'ADP?' being the highest compared with the other impact categories. In the alternative scenario (100% recycling), input materials (A1) dominate in every category except for total GWP, biogenic GWP and LULUC GWP.

The largest share of gross energy demand (total non-renewable primary energy (PENRT) + total renewable primary energy (PERT)), amounting to approximately 13.9 MJ, is attributed to production (Modules A1—A3). In this context, the production of raw materials (Module A1), is the dominant contributor, accounting for more than 95%. Approximately 3.03 MJ is credited for energy recovery (Module D) during the incineration process of the roll goods.

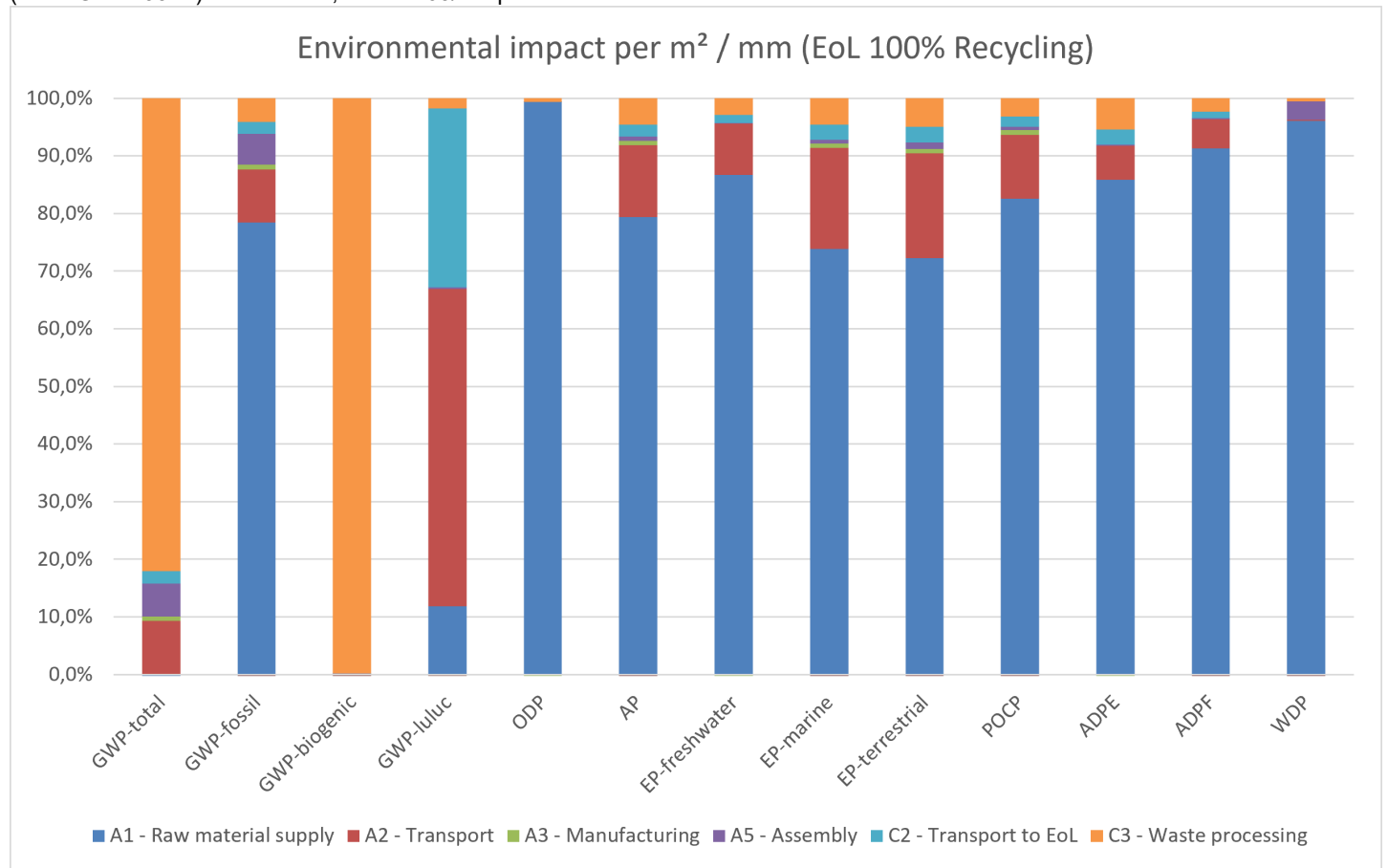


As a general rule, REGUPOL sheet material (in rolls) is

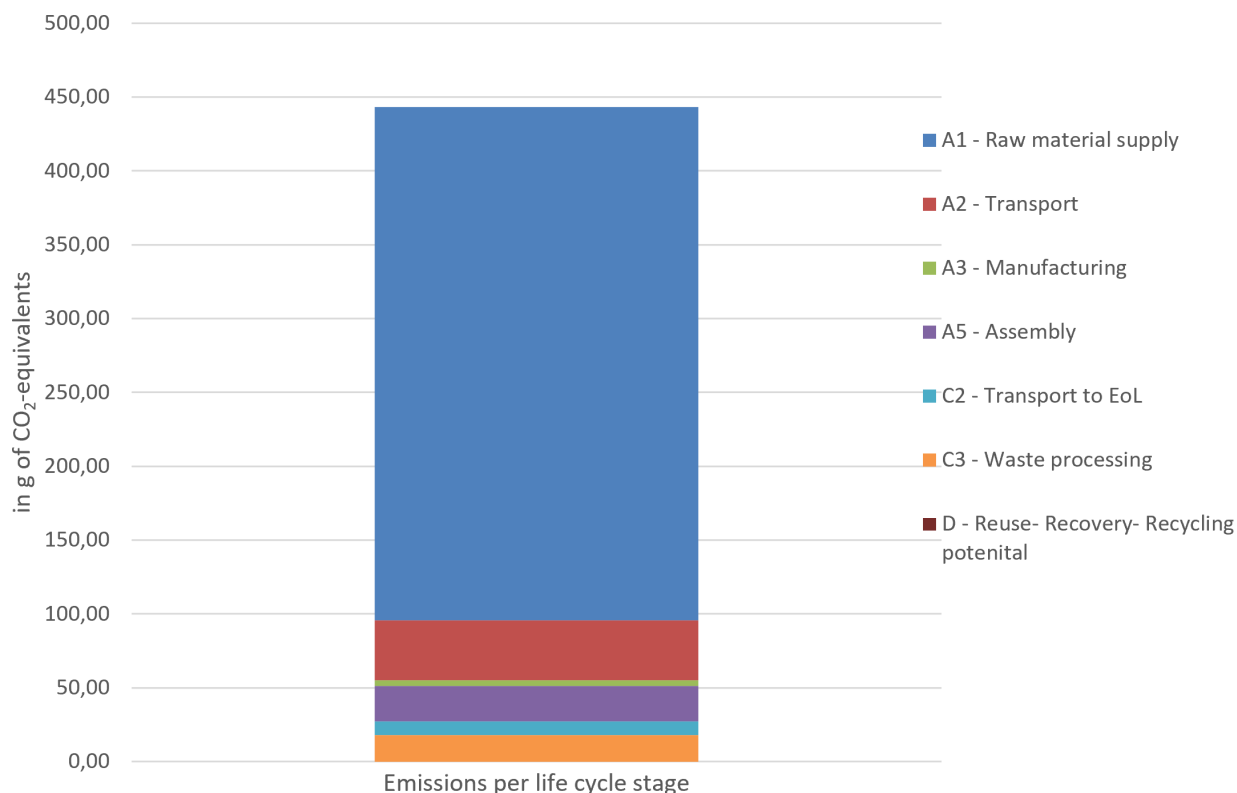
designed in such a way that it can be fully recycled. The following scenario illustrates 100 % recycling. In this case, the environmental impacts of modules A1—A3, A5 and C2 remained the same, whilst the environmental impacts of module

03/1 (waste treatment) were reduced by an average of 90 %
(fossil GWP: 93 %). In this case, module 03/1 represents the

material recovery of the material.



GWP-fossil laminated onto 1 m² average REGUPOL sheet material (in rolls)
(grams per square metre: 0,89 kg / m² / mm) (EoL 100% Recycling)



If the results for 1 mm are multiplied by the minimum (or maximum) thickness of the standard range, they are 2.5 times (32 times) the results shown here. Alternatively, the results can

be divided by the average bulk density and multiplied by the specific bulk density to arrive at a precise result for the product in question.

7. Requisite evidence

No supporting documentation is required for this EPD, as no hazardous substances as defined by the *CLP Regulation* are

used.

8. References

Standards

EN 15804

EN 15804:2012+A1:2013, Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products.

EN 15804

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

ISO 14025

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

ISO 14001

ISO 14001:2015/Amd 1:2024, Environmental management systems — Requirements with guidance for use — Amendment 1: Climate action changes.

ISO 14021

ISO 14021:2016/Amd 1:2021, Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling) — Amendment 1: Carbon footprint, carbon neutral.

ISO 14025

ISO 14025:2006, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.

ISO 45001

ISO 45001:2018/Amd 1:2024, Occupational health and safety management systems — Requirements with guidance for use — Amendment 1: Climate action changes.

ISO 50001

ISO 50001:2018/Amd 1:2024, Energy management systems — Requirements with guidance for use — Amendment 1: Climate action changes.

ISO 9001

ISO 9001:2015/Amd 1:2024, Quality management systems —

Requirements — Amendment 1: Climate action changes.

EN 13501-1

EN 13501-1:2018, Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests.

Further literature**AVV**

Waste Catalogue Ordinance (Abfallverzeichnis-Verordnung - AVV) of 10 December 2001 (Federal Law Gazette I, p. 3379), as last amended by Article 1 of the Ordinance of 30 June 2020 (Federal Law Gazette I, p. 1533).

CLP Regulation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).

LCA for Experts (LCA FE)

LCA for Experts (Version 2025.1), life cycle assessment software by Sphera.

ecoinvent database

ecoinvent database, version 3.10, 2024.

IBU 2021

Institut Bauen und Umwelt e.V. (IBU): Product Category Rules for Building-Related Products and Services. Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report in Accordance with EN 15804+A2:2019, version 1.4. Berlin: Institut Bauen und Umwelt e.V. (ed.).

PCR: Floor coverings

Product Category Rules for Building-Related Products and Services. Part B: Requirements on the EPD for Floor coverings, version 11. Berlin: Institut Bauen und Umwelt e.V. (IBU) (ed.), 2024-08.

Directive 2008/98/EC

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

Decision 2000/532/EC

2000/532/EC: Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (notified under document number C(2000) 1147) (Text with EEA relevance).

**Publisher**

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

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

**Programme holder**

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

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

**Author of the life cycle assessment**

TÜV Rheinland Energy & Environment GmbH
Am Grauen Stein 33
51105 Köln
Germany

+49 (0)221 806 0
carbon@de.tuv.com
www.tuv.com

**Owner of the Declaration**

REGUPOL Germany GmbH & Co. KG.
Am Hilgenacker 24
57319 Bad Berleburg
Germany

+49 2751 803-0
info@regupol.de
<https://www.regupol.de/>