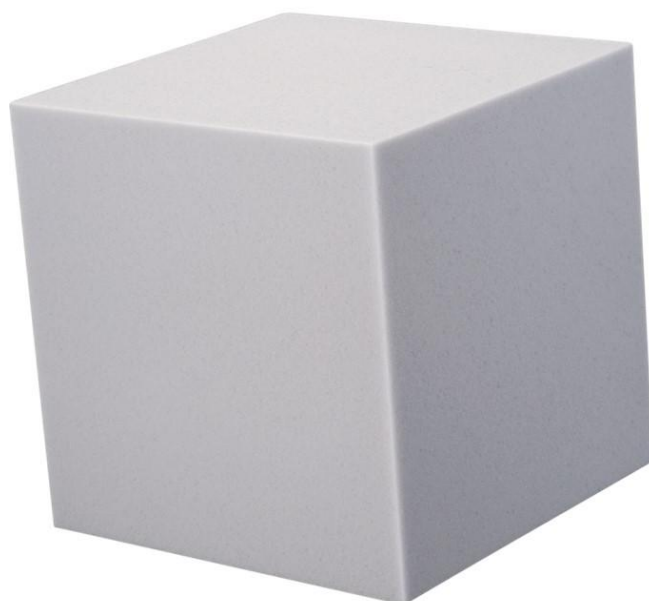


MASS BALANCE PRODUCT INFORMATION

Owner of the Document	BASF SE	
Publisher	Institut Bauen und Umwelt e.V. (IBU)	
Document number	MBA-BAS-0001	
Issue date	21.07.2026	
Valid to	20.07.2027	

Basotect® G+ EcoBalanced
BASF SE

www.ibu-epd.com



General Information

BASF SE

Programme holder

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

Document number

MBA-BAS-0001

This document is based on the product category rules:

Name of PCR, 05.2016
(PCR checked and approved by the SVR)

Issue date

21.07.2026

Valid to

20.07.2027



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



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

Basotect® G+ EcoBalanced

Owner of the Document

BASF SE
Carl-Bosch-Straße 38
67056 Ludwigshafen
Germany

Declared product / declared unit

1 m³ of Basotect® G+ EcoBalanced

Scope:

This Mass Balance Product Information applies to Basotect® G+ EcoBalanced, a flexible, open-cell foam made from melamine resin, a thermoset polymer. For Basotect® G+ EcoBalanced green electricity in the production process and the attribution of renewable materials from biowaste via a biomass balance approach was applied. Basotect® G+ EcoBalanced is manufactured in the form of untrimmed blocks by BASF in Ludwigshafen and Schwarzheide in Germany. Its sound absorption capacity and safe fire characteristics make Basotect® G+ EcoBalanced suitable for use as sound absorption in buildings. Due to the large design freedom, customized product solutions can be manufactured from the foam block. The Life Cycle Assessment of Basotect® G+ EcoBalanced is based on weighted average data of both manufacturing sites.

The owner of the document 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.

For specification of the calculation method see chapter "Mass balance approach (MBA)"

The Product information was created orienting towards the specifications of EN 15804+A2.

For the use of the verified Document please see: EPD-BAS-20250502-IBC1-EN.

Verification

The standard *EN 15804* serves as the core PCR
Independent verification of the Document and data
according to *ISO 14025:2011*

☐ internally ☒ externally



Dr. Jan Werner
(Independent verifier)

Product

Product description/Product definition

Basotect® G+ EcoBalanced is a light-grey, open-cell foam made from melamine resin, a thermoset polymer. Basotect® G+ EcoBalanced is manufactured in the form of untrimmed blocks with a thin outer skin. The blocks are delivered in film packaging. For the use and application of the product the respective national provisions at the place of use apply. Basotect® G+ EcoBalanced is certified by the General Building Authority, corresponding to No. 3.4. of Model Administrative Provisions - Technical Building Rules Rheinland-Pfalz., Edition May 8th, 2022, building

materials on which only requirements for reaction to fire are placed and which are flame retardant (*DIN 4102-B1*).

Application

Basotect® G+ EcoBalanced is a semi-finished product in the form of untrimmed blocks that must be further processed for proper use in selected applications. Therefore, the foam blocks of Basotect® G+ EcoBalanced are supplied to foam converters for further processing. This is where the product is cut into multidimensional shapes by slitting, milling, sawing and

stamping to form the required contour. Depending on the field of application, material combinations are also possible (e.g. felt, aluminum foil). These components can be used for sound absorption purposes for wall and ceiling applications inside buildings to improve the acoustics of rooms and for thermal and acoustical insulation for technical building equipment (HVAC: heating, ventilation, air conditioning).

Technical Data

Performance data of the product with respect to its characteristics in accordance with the relevant technical provision (no CE-marking). The technical data are specified in the table below.

Technical data

Name	Value	Unit
Color	grey	
Density (according to EN ISO 845)	9 ± 1.5	kg/m ³
Fire behaviour (DIN 4102-1)	B1	
Sound absorption (ISO 10534-2, @50 mm thickness, @2000 Hz frequency)	≥90	%
Thermal conductivity (DIN EN 12667, @50 mm thickness, @10°C)	≤0.035	W/(m·K)
Average compression hardness EN ISO 3386-1	>9	kPa

The open-cell foam structure of Basotect® G+ EcoBalanced contributes to its low density of 9 kg/m³. Due to its low density, Basotect® G+ EcoBalanced can contribute to a reduction of the weight of insulation components.

Its coloration makes it less sensitive to soiling, which also makes Basotect® G+ EcoBalanced suitable for many construction and industrial applications. Basotect® G+ EcoBalanced is designed to comply with relevant international fire safety standards. Basotect® is rated in the highest classification category for organic materials according to *DIN 4102*.

Basotect® G+ EcoBalanced offers good thermal insulation with a low thermal conductivity of less than 0.04 W/(m·K) according to *DIN EN 12667*.

The open-cell surface allows sound waves to penetrate the cell structure rather than being reflected. The sound energy is reduced in the cell structure, giving Basotect® G+ EcoBalanced high sound absorption capacity in the medium and high frequencies (see technical data). At low frequencies, technical acoustic improvements can be achieved, for example, by means of additional heavy layers.

Base materials/Ancillary materials

Composition of Basotect® G+ EcoBalanced

Name	Value	Unit
Melamine resin	≥ 95	%
Additives	< 5	%

Basotect® G+ EcoBalanced consists mainly of cured melamine resin, a thermoset which is three dimensionally cross-linked. The remaining ingredients are additives used for the foaming process (e.g. surfactants) and a dye for coloration purposes. Basotect® G+ EcoBalanced is compliant with the *RoHS directive* and is not subject to labeling

requirements under the German hazardous material regulations. Basotect® G+ EcoBalanced is produced

without the use of halogenated hydrocarbons and it is supplied without blowing agents.

The product is delivered without any substances of very high concern (SVHC) above a limit of 0.1 % w/w according to the candidate list, article 59 (1, 10) European *REACH regulation (EC) No. 1907/2006*. This statement refers to the following candidate list version: Candidate list, last updated: 04 February 2026.

Although melamine is listed as an SVHC, Basotect® does not contain measurable free melamine, as the substance is fully reacted during production. Therefore, Basotect® articles are considered melamine free and are not subject to additional SVHC obligations.

To the best of our knowledge Basotect® G+ EcoBalanced does not contain CMR substances (substances classified carcinogenic, mutagenic or toxic for reproduction under *Regulation (EC) No 1272/2008 [CLP]*) equal or above 0.1% w/w. In the manufacture of Basotect® G+ EcoBalanced biocides are not used as raw material and are also not present in the product. No post reaction auxiliaries or additives are introduced to the fully polymerized product following completion of the manufacturing process.

Environment and health during use

The requirements of the General Committee for the health evaluation of building materials (*AgBB*) are fulfilled. Basotect® G+ EcoBalanced meets the requirement for class A according to the French VOC regulation (*ISO 16000*).

Reference service life

No reference service life (RSL) for Basotect® G+ EcoBalanced according to *ISO 15686* was determined. According to the table of service life of building components provided by the Federal Ministry for Housing, Urban Development and Building special constructions for ceiling claddings (acoustic ceilings, acoustic elements, acoustic foam and sound absorbers) including fastenings have a service life of ≥50 years.

LCA: Calculation rules

Declared Unit

This Mass Balance Product Information refers to a declared unit of 1 m³ of Basotect® G+ EcoBalanced with a declared density of 9 kg/m³.

Declared unit

Name	Value	Unit
Declared unit	1	m ³
Density	9	kg/m ³
Conversion factor	0.11	m ³ /kg

The LCA values are based on a German site average where production data is available.

System boundary

The type of the system under study is cradle to gate with modules C1–C4 and module D (A1–A3 + C + D). This mass balance (MB) product information includes averaged results with geographical scope of Europe. Reference year is 2023 as primary production data is taken from a 2021–2023 average.

Product (A1–A3)

The product stage covers the production of the raw materials (A1), transport to the Basotect® G+ EcoBalanced manufacturing sites in Germany (A2) and the mixing of raw materials and the foaming and drying process in Ludwigshafen and Schwarzheide in Germany (A3), including the use of packaging material. The packing material consists of polyethylene film, and about 0.65 kg is required to pack 1m³ of Basotect® G+ EcoBalanced. Electricity from wind power is utilised in the production of Basotect® G+ EcoBalanced. The LCA model incorporates a dataset for electricity from wind power. Due to confidentiality agreements, emission factors cannot be disclosed as the referenced dataset was used directly without modification. This dataset has been evaluated against other renewable wind electricity datasets and falls within their respective ranges. The proportion of the electricity demand covered by electricity from wind power is 100 %.

End of life (C1–C4)

Modules C1 to C4 are included in the assessment. For C1 (deconstruction), Basotect® G+ EcoBalanced is manually dismantled which results in a value of zero. For C2 (transport to the disposal site), the distance was estimated by an expert from the operating division within BASF. For C3 (waste processing) no specific treatment is required which results in a value of zero. Basotect® G+ EcoBalanced is then sent directly to thermal processing after dismantling. The C4 module is included with thermal waste processing within a waste incineration plant.

Benefits and loads beyond the system boundaries (D)

In module D the recovery potential expressed as net impacts and benefits are covered. It details the benefits in form of steam and electricity generated from thermal utilization resulting from waste incineration in module C4.

Biomass Balance approach was applied to the life cycle assessment.

Assumptions

For modules A1–A3, it is assumed that only 85% of the cooling water input undergoes wastewater treatment due to leakages and evaporation.

Pentane is utilised as the foaming agent within modules A1–A3 during the manufacturing process and is subsequently combusted. In the absence of an appropriate dataset for pentane combustion in the Sphera database, a natural gas combustion dataset was selected and incorporated into the LCA model, with adjustments made according to the calorific value of pentane to ensure methodological consistency. Furthermore, during both the transportation of raw materials in modules A1–A3 and the transport of waste in module C, trucks operate at a utilisation rate of 55% due to the used dataset.

For module C2, a distance of 75 km was referenced from the literature due to the unavailability of primary data from BASF.

Cut-off

Cut-off for all input materials is 0.01 mass%, except for precious metal-containing catalysts with a cut-off of 0.0001 mass% in the background datasets. For background system cut-off criteria, refer to the Sphera database documentation. No known flows are deliberately excluded from this MB product information. Heat recovery in Modules A1–A3 are treated via cut-off as well.

Background Data

The LCA model was set up using the *LCA for Experts Software* and background data was taken from the Database for Life Cycle Engineering from *Sphera* (Software Version 10.9.0.31 MLC 2025.1). This database provides several operating processes and raw materials.

Data Quality

Overall, the data quality of the study appears to be high across the dimensions considered. Precision is considered high, as the majority of foreground data have been obtained through direct measurement or calculation from primary sources, with seasonal and site differences accounted for by applying weighted averages across a three-year period.

Background data from *Sphera* MLC databases also have documented precision, and production efficiency variations were averaged across sites. Completeness is addressed by utilising primary data for foreground processes, thereby supporting comprehensive mass balance and emission inventories, and ensuring that no information is intentionally excluded. Background data from *Sphera* MLC databases also meet documented completeness standards.

Consistency is considered high, as primary data were uniformly collected from SCOTT and all background data were sourced from the *Sphera* MLC 2025.1 databases. Reproducibility is supported through disclosure of input-output data, dataset choices, and modelling approaches, enabling third parties to approximate results using the same methods.

Regarding representativeness, temporal coverage is good, with primary data averaged for 2021–2023 and secondary data mainly from 2024, aligned with the reference year 2023. Geographical representativeness is considered high, as data were specific to the studied

regions. Technological representativeness is good, with data tailored to relevant technologies or mixes, and proxies applied where technology-specific data were unavailable.

Allocation

During Basotect® G+ EcoBalanced production no co-products are produced, so no allocation is applied here. If pre-steps in the value chain of BASF production require allocation, it will follow an existing PCR or mass allocation method. Enthalpy allocation is applied within the BASF site specific electricity consumption mix. There might be allocation applied within the used background Sphera datasets. This can always be checked online in the documentation of the datasets. Additionally, generic Sphera datasets were used for a multi-input process like waste treatment in A and C modules. Hence, the documentation on its allocation can be found online. Full benefits from recovery outside the BASF gate are assigned to module D.

Mass balance approach (MBA)

The Mass Balance Product Information was prepared using a Biomass Balance approach. Consequently, fossil feedstock is treated as substituted by renewable feedstock (here, biomethane) through an allocation method rather than by direct physical replacement. Additionally, electricity from wind power was allocated

100 % to the production amount of 1 m³ of product. BASF has implemented certification schemes such as REDcert² and ISCC PLUS for the substitution of fossil with recycled and renewable raw materials (ChemCycling and BMB respectively). The certified MB sites certified by ISCC PLUS is publicly available on ISCC PLUS website (under valid certificates), and individual product certificates are available to REDcert² system users on REDcert website: REDcert²-929-35418234-P-43900.

Additional Information

Number of the EPD acc. To EN15804+A2 for this product or product family: EPD-BAS-20250502-IBC1-EN

Comparability

Database for Life Cycle Engineering from Sphera (Software Version 10.9.0.31 MLC 2025.1) was used.

LCA: Scenarios and additional technical information

Characteristic product properties

Information on biogenic carbon

The biogenic carbon content of the declared product is 0,31 kg C/kg product. The packaging does not contain any biogenic carbon.

As A5 is not declared, hence some additional information on the packing material is provided. The amount of packing needed is 650 g of PE-film per declared unit. Additional technical details are supplied for modules C and D. Modules A4, A5, and B are not included in this study; consequently, no information pertaining to these modules will be presented herein.

End of life (C1-C4)

The waste being disposed of is Basotect® G+ EcoBalanced, classified as non-hazardous and suitable for incineration at municipal waste facilities.

Module C2

accounts for the transport of this waste from the point of use to the incineration plant; an average transport distance was assumed for this calculation. In Module C4, Basotect® G+ EcoBalanced is incinerated with recovery of electricity and steam. Additionally, packaging PE film requires disposal, but this is outside the scope of the current Mass Balance Product Information. All values presented refer to the declared unit.

Name	Value	Unit
Collected separately waste type PE film	0.65	kg
Collected as mixed construction waste Basotect® G+ EcoBalanced	9.0	kg

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

The values for recovery in module D are generated from thermal utilization resulting from waste incineration in module C.

Name	Value	Unit
Steam Recovery	25.3	MJ
Electricity Recovery	11.1	MJ

LCA: Results

Environmental impacts are presented using LCIA impact category parameters and characterisation factors that comply with EN 15804 requirements.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = 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	MND	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: declared unit and product

Core Indicator	Core Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	Global warming potential - total	[kg CO ₂ -Eq.]	4.53E+01	0.00E+00	7.76E-02	0.00E+00	1.39E+01	-2.72E+00
GWP-fossil	Global warming potential - fossil fuels	[kg CO ₂ -Eq.]	5.38E+01	0.00E+00	7.67E-02	0.00E+00	3.83E+00	-2.71E+00
GWP-biogenic	Global warming potential - biogenic	[kg CO ₂ -Eq.]	-8.54E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+01	-1.24E-02
GWP-luluc	GWP from land use and land use change	[kg CO ₂ -Eq.]	2.04E-02	0.00E+00	8.12E-04	0.00E+00	7.07E-04	-3.13E-03
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	1.25E-07	0.00E+00	9.30E-15	0.00E+00	1.59E-14	-2.13E-11
AP	Acidification potential of land and water	[kg H ⁺ -Eq.]	1.02E-01	0.00E+00	4.84E-04	0.00E+00	4.73E-03	-2.88E-03
EP-freshwater	Eutrophication, fraction of nutrients reaching freshwater end compartment	[kg P-Eq.]	8.31E-04	0.00E+00	2.13E-07	0.00E+00	5.57E-07	-2.10E-06
EP-marine	Eutrophication, fraction of nutrients reaching marine end compartment	[kg N-Eq.]	5.18E-02	0.00E+00	2.40E-04	0.00E+00	1.84E-03	-8.67E-04
EP-terrestrial	Eutrophication, accumulated exceedance	[mol N-Eq.]	3.95E-01	0.00E+00	2.61E-03	0.00E+00	2.31E-02	-9.68E-03
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg NMVOC-Eq.]	1.09E-01	0.00E+00	4.45E-04	0.00E+00	4.77E-03	-2.39E-03
ADPE	Abiotic depletion potential for non-fossil resources	[kg Sb-Eq.]	8.71E-06	0.00E+00	5.23E-09	0.00E+00	6.01E-09	-2.34E-07
ADPF	Abiotic depletion potential for fossil resources	[MJ]	6.55E+02	0.00E+00	1.00E+00	0.00E+00	4.81E+00	-4.69E+01
WDP	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	[m ³ world-Eq deprived]	1.82E+00	0.00E+00	3.16E-04	0.00E+00	1.41E+00	-2.32E-01

Caption: 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: declared unit and product

Indicator	Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	1.63E+03	0.00E+00	7.39E-02	0.00E+00	1.45E+02	-1.30E+01
PERM	Renewable primary energy resources as material utilization	[MJ]	1.44E+02	0.00E+00	0.00E+00	0.00E+00	-1.44E+02	0.00E+00
PERT	Total use of renewable primary energy resources	[MJ]	1.77E+03	0.00E+00	7.39E-02	0.00E+00	1.09E+00	-1.30E+01
PENRE	Non-renewable primary energy as energy carrier	[MJ]	6.55E+02	0.00E+00	1.00E+00	0.00E+00	4.81E+00	-4.69E+01
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	Total use of non-renewable primary energy resources	[MJ]	6.55E+02	0.00E+00	1.00E+00	0.00E+00	4.81E+00	-4.69E+01
SM	Use of secondary material	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	1.22E-22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of non-renewable secondary fuels	[MJ]	1.43E-21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	[m ³]	-7.36E-01	0.00E+00	3.56E-05	0.00E+00	3.30E-02	-1.01E-02

Caption: 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: declared unit and product

Indicator	Indicator	Unit	A1-A3	C1	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	1.77E-06	0.00E+00	3.64E-11	0.00E+00	2.25E-09	-2.53E-08
NHWD	Non-hazardous waste disposed	[kg]	1.61E+00	0.00E+00	1.32E-04	0.00E+00	1.04E+00	-2.17E-02
RWD	Radioactive waste disposed	[kg]	9.62E-03	0.00E+00	1.32E-06	0.00E+00	2.08E-04	-3.00E-03
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	Materials for energy recovery	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	Exported electrical energy	[MJ]	3.58E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+01	0.00E+00
EET	Exported thermal energy	[MJ]	8.42E+00	0.00E+00	0.00E+00	0.00E+00	2.53E+01	0.00E+00

Caption 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: [declared unit and product]

Indicator	Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PM	Potential incidence of disease due to PM emissions	[Disease Incidence]	9.76E-07	0.00E+00	3.08E-09	0.00E+00	3.28E-08	-2.34E-08
IRP	Potential Human exposure efficiency relative to U235	[kBq U235-Eq.]	1.22E+00	0.00E+00	1.83E-04	0.00E+00	3.25E-02	-4.94E-01
ETP-fw	Potential comparative toxic unit for ecosystems	[CTUe]	2.83E+02	0.00E+00	1.30E+00	0.00E+00	2.28E+00	-3.64E+00
HTP-c	Potential comparative toxic unit for humans - cancerogenic	[CTUh]	2.59E-08	0.00E+00	1.76E-11	0.00E+00	1.87E-10	-4.44E-10
HTP-nc	Potential comparative toxic unit for humans - not cancerogenic	[CTUh]	7.27E-07	0.00E+00	9.89E-10	0.00E+00	2.56E-08	-6.90E-09
SQP	Potential soil quality index	[-]	5.87E+01	0.00E+00	4.46E-01	0.00E+00	1.22E+00	-7.68E+00

Caption 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 nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from 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 or as there is limited experienced with the indicator.

Disclaimer 3 – Mass Balance Approach in the sense of a virtual allocation is not allowed within EN15804+A2. The underlying calculation is oriented on the EN15804 but uses allocation methods described in the chapter “Mass balance approach (MBA)”. IBU cannot guarantee that this document will be accepted as evidence by third parties.

Interpretation

A comprehensive understanding of the environmental impacts of industrial processes is essential for developing effective strategies to mitigate ecological effects. This interpretation focuses on Basotect® G+ EcoBalanced production to identify the main contributors to the reported environmental indicators across the system boundaries.

Primary contributor to the environmental indicators within module A1-A3 is the general production of Basotect® G+ EcoBalanced, particularly the production of the biogenic feedstock, production of other raw materials and renewable electricity.

Within module C, the reported impacts mainly originate from waste treatment processes. These processes are modelled using generic datasets representing typical waste management practices, in accordance with established LCA methodology. Module D includes potential benefits and loads beyond the system boundary associated with these waste treatment processes, as calculated based on the applied modelling approach.

Regarding data quality, the majority of datasets used in the assessment exhibit very good temporal and geographical representativeness. The technical representativeness is generally assessed as good. However, some datasets—particularly in the modelling of waste treatment—are rated as fair. In these cases, certain parameters (e.g. heating values) do not exactly correspond to those of Basotect® G+ EcoBalanced but are within a comparable range. This may influence the precision of the results for module C.

Reference

Standards

AgBB

AgBB – Committee for Health-related Evaluation of Building Products. AgBB Evaluation Scheme for VOC Emissions from Building Products (latest revision). Federal Environment Agency (UBA), Germany.

DIN 4102-1

DIN (1998): DIN 4102-1 - Fire behavior of building materials and elements - Classification of building materials - Requirements and testing. Berlin: Deutsches Institut für Normung.

DIN EN 12667

DIN (2001): DIN EN 12667 - Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance. Berlin: Deutsches Institut für Normung.

EN 15804

DIN (2022): DIN EN 15804:2022-03 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products; German version (EN 15804:2012 + A2:2019 + AC2021). Berlin: Beuth Verlag.

EN 15941

CEN (2010): CEN/TR 15941: Sustainability of construction works - Data quality for environmental assessment of products and construction work - Selection and use of data; German version, Brüssel: CEN.

ISO 845

ISO (2006): EN ISO 845 - Cellular plastics and rubbers - Determination of apparent density. Geneva: International Organization for Standardization.

ISO 3386-1

ISO (2025): ISO 3386-1 - Polymeric materials, cellular flexible - Determination of stress-strain characteristics in compression. Geneva: International Organization for Standardization.

ISO 10534-2

ISO (2023): ISO 10534-2 - Determination of acoustic properties in impedance tubes. Part 2: Two-microphone technique for normal sound absorption coefficient and normal surface impedance. Geneva: International Organization for Standardization.

ISO 14025

ISO (2006): ISO 14025:2006 – Environmental labels and declarations – Type III environmental declarations – Principles and procedures. Geneva: International Organization for Standardization.

ISO 14040

DIN (2021): DIN EN ISO 14040:2021 02 – Environmental management — Life cycle assessment — Principles and framework (ISO 14040:2006 + Amd 1:2020); German version, EN ISO 14040:2006 +

A1:2020. Berlin: Beuth Verlag.

ISO 14044

DIN (2021): DIN EN ISO 14044:2021 02 – Environmental management - Life cycle assessment - Requirements and guidelines (ISO 14044:2006 + Amd 1:2017 + Amd 2:2020); German version EN ISO 14044:2006 + A1:2018 + A2:2020. Berlin: Beuth Verlag.

ISO 15686

ISO(2011): ISO 15686 – Buildings and constructed assets — Service life planning — Part 1: General principles and framework. Geneva: International Organization for Standardization.

ISO 16000

ISO (series): Indoor air – Methods for the determination of indoor air quality. Geneva: International Organization for Standardization.

LCA for Experts Software

Thinkstep AG (now Sphera). LCA for Experts (formerly GaBi): Professional software for life cycle assessment. Sphera Solutions GmbH, Germany.

PCR: Part A

Institut Bauen und Umwelt e.V. (2024): 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. (Version 1.4) Berlin.

PCR: Part B

Institut Bauen und Umwelt e.V. (2025): PCR Guidance – Texts for Building-Related Products and Services. Part B: Requirements on the EPD for Sound Absorption Materials. Version v1, 06.02.2025. Berlin.

REACH

European Union. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Official Journal of the European Union, L 396, 30.12.2006

Regulation (EC) No 1272/2008 (CLP)

European Union. 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 (CLP). Official Journal of the European Union, L 353, 31.12.2008

RoHS Directive

European Union. Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast). Official Journal of the European Union, L 174, 01.07.2011.

Further References

Babel, O. (2021): Pentan, n-Pentan, iso-Pentan: Retrieved from Management consultancy. Babel: www.unternehmensberatung-babel.de

Bantle, Annika (2025): SCOTT - Strategic CO2 Transparency Tool.

BASF SE (2022): Basotect® - The Versatile Melamine Resin Foam. Germany: BASF SE.

Bundesministerium der Justiz (n.d.): Anlage 2 – Bestimmung der Getrennsammlung von Abfällen nach § 9 Absatz 1 KrWG. Verfügbar unter: https://www.gesetze-im-internet.de/krwg/anlage_2.html (Accessed: 09 February 2026).

EcoTransIT World (2025): Retrieved from [ecotransit.org](https://www.ecotransit.org/): <https://www.ecotransit.org/de/>

European Commission (2021): EU transport in figures: Statistical Pocketbook 2021. Luxembourg: Publications Office of the European Union. doi:10.2832/27610. P. 164. Available at: <https://op.europa.eu/en/publication-detail/-/publication/14d7e768-1b50-11ec-b4fe-01aa75ed71a1> [Accessed 11 Feb. 2026].

European Commission (2024): Quarterly road freight transport by type of operation, EU, 2019–2023.

Eurostat. Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Quarterly_road_freight_transport_by_type_of_operation,EU,2019-2023\(billion_tonne-kilometres\).png](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Quarterly_road_freight_transport_by_type_of_operation,EU,2019-2023(billion_tonne-kilometres).png) [Accessed 11 Feb. 2026].

Institut Bauen und Umwelt e.V. (2022): General Instructions for the IBU EPD Programme (Version 2.1). Berlin: Institut Bauen und Umwelt e.V.

Möller, P. (2023): Global Freight Transport Statistics: International, Europe, and Germany. Retrieved from [dhl-freight-connections.com](https://dhl-freight-connections.com/en/trends/global-freight-transport-statistics-international-europe-and-germany/): <https://dhl-freight-connections.com/en/trends/global-freight-transport-statistics-international-europe-and-germany/>

Sphera Solutions (2020): Process data set: Thermal energy from natural gas; technology mix regarding firing and flue gas cleaning; production mix, at heat plant; 100% efficiency (en). Retrieved from lcadatabase.sphera.com: <https://lcadatabase.sphera.com/2024/xml-data/processes/009f27a6-f336-4200-81c0-28e4fa5638a4.xml>

Sphera (n.d.): LCA Database. Available at: <https://lcadatabase.sphera.com/> (Accessed: 09 February 2026).

**Publisher**

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

Tel +49 (0)30 3087748- 0
Fax +49 (0)30 3087748- 29
Mail info@ibu-epd.com
Web www.ibu-epd.com

**Programme holder**

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

Tel +49 (0)30 - 3087748- 0
Fax +49 (0)30 - 3087748 - 29
Mail info@ibu-epd.com
Web www.ibu-epd.com

**Author of the Life Cycle
Assessment**

BASF Service Europe GmbH
Storkower Strasse 146
10407 Berlin
Germany

+49 (0)621 60-0
global.info@basf.com
www.basf.com

**Owner of the Document**

BASF SE
Carl-Bosch-Straße 38
67056 Ludwigshafen
Germany

+49 (0)621 60-0
global.info@basf.com
www.basf.com