

Güteschutz Beton

14. Infotag Güteschutz Beton

**„Anwendung der neuen Normen DIN 1045:2023-08 bei
Betonfertigteilen, rezyklierte Gesteinskörnung, neue EU-
BauPVO, Ökobilanzierungen“**

Ökobilanzierungen u. Umweltproduktdeklarationen



Ökobilanzierungen u. Umweltproduktdeklarationen

EPD verified

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ENVIRONMENTAL IMPACT DATA

IN ACCORDANCE WITH

ABI-Elementdecke
Andernacher Bimswerk GmbH



CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	1,67E+01	6,27E-01	2,39E+00	1,97E+01	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01								
GWP – fossil	kg CO ₂ e	1,67E+01	6,26E-01	2,39E+00	1,97E+01	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01								
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00								
GWP – LULUC	kg CO ₂ e	8,38E-03	2,31E-04	2,67E-04	8,88E-03	MND	3,30E-04	5,12E-04	9,23E-04	1,46E-04	-1,95E-03								
Ozone depletion pot.	kg CFC-11e	8,70E-07	1,44E-07	1,61E-07	1,18E-06	MND	7,07E-07	3,19E-07	2,21E-07	6,24E-08	-4,98E-07								
Acidification potential	mol H ⁺ e	6,83E-02	2,65E-03	7,36E-03	7,83E-02	MND	3,44E-02	5,88E-03	1,04E-02	1,45E-03	-5,34E-02								
EP-freshwater ²⁾	kg Pe	1,87E-04	5,13E-06	1,03E-04	2,95E-04	MND	1,10E-05	1,14E-05	3,23E-05	1,62E-06	-4,81E-04								
EP-marine	kg Ne	1,94E-02	7,88E-04	2,05E-03	2,22E-02	MND	1,52E-02	1,75E-03	3,62E-03	5,02E-04	-1,08E-02								
EP-terrestrial	mol Ne	2,32E-01	8,70E-03	2,31E-02	2,64E-01	MND	1,67E-01	1,93E-02	4,00E-02	5,52E-03	-1,29E-01								
POCP ("smog" ³⁾)	kg NMVOCe	5,62E-02	2,78E-03	6,88E-03	6,59E-02	MND	4,59E-02	6,17E-03	1,11E-02	1,61E-03	-5,94E-02								
ADP-minerals & metals ⁴⁾	kg Sbe	7,08E-05	1,47E-06	1,32E-06	7,36E-05	MND	1,68E-06	3,25E-06	2,29E-05	3,54E-07	-3,09E-04								
ADP-fossil resources	MJ	1,32E+02	9,41E+00	3,03E+01	1,71E+02	MND	4,45E+01	2,09E+01	1,88E+01	4,23E+00	-1,08E+02								
Water use ⁵⁾	m ³ e depr.	1,91E+00	4,21E-02	1,51E-01	2,10E+00	MND	1,20E-01	9,33E-02	1,92E-01	1,34E-02	-2,58E+00								

EPD HUB, HUB-1895
Published on 27.09.2024, last update

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.



Ökobilanzierungen u. Umweltproduktdeklarationen

EPD verified

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VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

One Click Created with One Click LCA



I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Imane Uald Iamkaddam, as an authorized verifier acting for EPD Hub Limited
27.09.2024



EPD verifiziert
ABI-Doppelwand

	C1	C2	C3	C4	D
0	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01
0	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01
0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
0	3,30E-04	5,12E-04	9,23E-04	1,46E-04	-1,95E-03
0	7,07E-07	3,19E-07	2,21E-07	6,24E-08	-4,98E-07
0	3,44E-02	5,88E-03	1,04E-02	1,45E-03	-5,34E-02
0	1,10E-05	1,14E-05	3,23E-05	1,62E-06	-4,81E-04
0	1,52E-02	1,75E-03	3,62E-03	5,02E-04	-1,08E-02
0	1,67E-01	1,93E-02	4,00E-02	5,52E-03	-1,29E-01
0	4,59E-02	6,17E-03	1,11E-02	1,61E-03	-5,94E-02
0	1,68E-06	3,25E-06	2,29E-05	3,54E-07	-3,09E-04
0	4,45E+01	2,09E+01	1,88E+01	4,23E+00	-1,08E+02
0	1,20E-01	9,33E-02	1,92E-01	1,34E-02	-2,58E+00

chemical ozone formation; 4) ADP = Abiotic depletion potential; environmental impact indicators shall be used with care as the



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ENVIRONMENTAL PRODUCT DECLARATION IN ACCORDANCE WITH EN 15804+A2:2019

ABI-Elementdecke
Andernacher Bimswerk GmbH



EPD HUB, HUB-1895
Published on 27.09.2024, last updated on 27.09.2024



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Andernacher Bimswerk GmbH & Co. KG
Address	Füllscheuerweg 22, 56626 Andernach, Germany
Contact details	info@abi-beton.de
Website	https://www.abi-beton.de/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 und ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	N/A
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	Solomon Abraha - Güteschutz Beton Nordrhein-Westfalen Beton- und Fertigteilwerke e.V.
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Imane Uald Lamkaddam as an authorized verifier for EPD Hub

B5	B6	B7	C1	C2	C3	C4	D
MND	MND	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01
MND	MND	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01
MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MND	MND	MND	3,30E-04	5,12E-04	9,23E-04	1,46E-04	-1,95E-03
MND	MND	MND	7,07E-07	3,19E-07	2,21E-07	6,24E-08	-4,98E-07
MND	MND	MND	3,44E-02	5,88E-03	1,04E-02	1,45E-03	-5,34E-02
MND	MND	MND	1,10E-05	1,14E-05	3,23E-05	1,62E-06	-4,81E-04
MND	MND	MND	1,52E-02	1,75E-03	3,62E-03	5,02E-04	-1,08E-02
MND	MND	MND	1,67E-01	1,93E-02	4,00E-02	5,52E-03	-1,29E-01
MND	MND	MND	4,59E-02	6,17E-03	1,11E-02	1,61E-03	-5,94E-02
MND	MND	MND	1,68E-06	3,25E-06	2,29E-05	3,54E-07	-3,09E-04
MND	MND	MND	4,45E+01	2,09E+01	1,88E+01	4,23E+00	-1,08E+02
MND	MND	MND	1,20E-01	9,33E-02	1,92E-01	1,34E-02	-2,58E+00

07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; nan health. The results of these environmental impact indicators shall be used with care as the



Ökobilanzierungen u. Umweltproduktdeklarationen

DEUTSCHE NORM

März 2022

DIN EN 15804



ICS 91.010.99; 91.040.01

Ersatz für
DIN EN 15804:2020-03

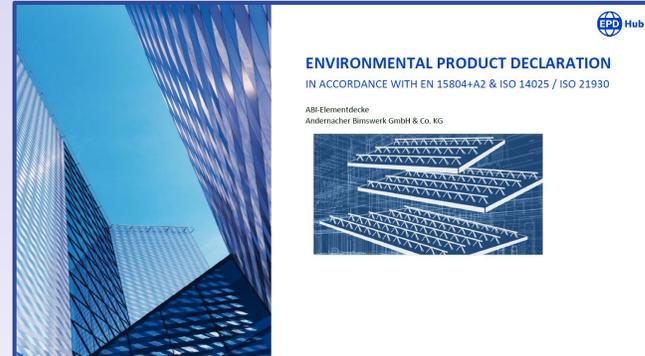
**Nachhaltigkeit von Bauwerken -
Umweltproduktdeklarationen -
Grundregeln für die Produktkategorie Bauprodukte;
Deutsche Fassung EN 15804:2012+A2:2019 + AC:2021**

Sustainability of construction works -
Environmental product declarations -
Core rules for the product category of construction products;
German version EN 15804:2012+A2:2019 + AC:2021

Ökobilanzierungen u. Umweltproduktdeklarationen

Die Bilanzierung von Zementen,
Betonrezepturen, Betonfertigteilen...

kgCO₂ -Ausstoß
in Bezug auf:
Tonne Zement
m³ Beton
Tonne o. m² Betonfertigteil...



ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	1,67E+01	6,27E-01	2,39E+00	1,97E+01	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01								
GWP – fossil	kg CO ₂ e	1,67E+01	6,26E-01	2,39E+00	1,97E+01	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01								
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00								
GWP – LULUC	kg CO ₂ e	8,38E-03	2,31E-04	2,67E-04	8,88E-03	MND	3,30E-04	5,12E-04	9,23E-04	1,46E-04	-1,95E-03								
Ozone depletion pot.	kg CFC-11e	8,70E-07	1,44E-07	1,61E-07	1,18E-06	MND	7,07E-07	3,19E-07	2,21E-07	6,24E-08	-9,88E-07								
Acidification potential	mol H ⁺ e	6,83E-02	2,65E-03	7,36E-03	7,83E-02	MND	3,44E-02	5,88E-03	1,04E-02	1,45E-03	-5,34E-02								
EP-freshwater ²⁾	kg Pe	1,87E-04	5,13E-06	1,03E-04	2,95E-04	MND	1,10E-05	1,14E-05	3,23E-05	1,62E-06	-8,81E-04								
EP-marine	kg Ne	1,94E-02	7,88E-04	2,05E-03	2,22E-02	MND	1,52E-02	1,75E-03	3,62E-03	5,02E-04	-1,08E-02								
EP-terrestrial	mol Ne	2,32E-01	8,70E-03	2,31E-02	2,64E-01	MND	1,67E-01	1,93E-02	4,00E-02	5,52E-03	-1,29E-01								
POCP ("smog") ³⁾	kg NMVOCe	5,62E-02	2,78E-03	6,88E-03	6,59E-02	MND	4,59E-02	6,17E-03	1,11E-02	1,61E-03	-5,94E-02								
ADP-minerals & metals ⁴⁾	kg Sbe	7,08E-05	1,47E-06	1,32E-06	7,36E-05	MND	1,68E-06	3,25E-06	2,29E-05	3,54E-07	-3,09E-04								
ADP-fossil resources	MJ	1,52E+02	9,41E+00	3,03E+01	1,71E+02	MND	4,45E+01	2,09E+01	1,88E+01	4,23E+00	-1,08E+02								
Water use ⁵⁾	m ³ e depr.	1,91E+00	4,21E-02	1,51E-01	2,10E+00	MND	1,20E-01	9,33E-02	1,92E-01	1,34E-02	-2,58E+00								

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.



Ökobilanzierungen u. Umweltproduktdeklarationen

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	1,67E+01	6,27E-01	2,39E+00	1,97E+01	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01								
GWP – fossil	kg CO ₂ e	1,67E+01	6,27E-01	2,39E+00	1,97E+01	MND													
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND													
GWP – LULUC	kg CO ₂ e	8,38E-03	2,31E-04	2,67E-04	8,88E-03	MND													
Ozone depletion pot.	kg CFC-11e	8,70E-07	1,44E-07	1,61E-07	1,18E-06	MND													
Acidification potential	mol H ⁺ e	6,83E-02	2,65E-03	7,36E-03	7,83E-02	MND													
EP-freshwater ²⁾	kg Pe	1,87E-04	5,13E-06	1,03E-04	2,95E-04	MND	1,10E-05	1,14E-05	3,23E-05	1,62E-06	-4,81E-04								
EP-marine	kg Ne	1,94E-02	7,88E-04	2,05E-03	2,22E-02	MND	1,52E-02	1,75E-03	3,62E-03	5,02E-04	-1,08E-02								
EP-terrestrial	mol Ne	2,32E-01	8,70E-03	2,31E-02	2,64E-01	MND	1,67E-01	1,93E-02	4,00E-02	5,52E-03	-1,29E-01								
POCP ("smog") ³⁾	kg NMVOCe	5,62E-02	2,78E-03	6,88E-03	6,59E-02	MND	4,59E-02	6,17E-03	1,11E-02	1,61E-03	-5,94E-02								
ADP-minerals & metals ⁴⁾	kg Sbe	7,08E-05	1,47E-06	1,32E-06	7,36E-05	MND	1,68E-06	3,25E-06	2,29E-05	3,54E-07	-3,09E-04								
ADP-fossil resources	MJ	1,32E+02	9,41E+00	3,03E+01	1,71E+02	MND	4,45E+01	2,09E+01	1,88E+01	4,23E+00	-1,08E+02								
Water use ⁵⁾	m ³ e depr.	1,91E+00	4,21E-02	1,51E-01	2,10E+00	MND	1,20E-01	9,33E-02	1,92E-01	1,34E-02	-2,58E+00								

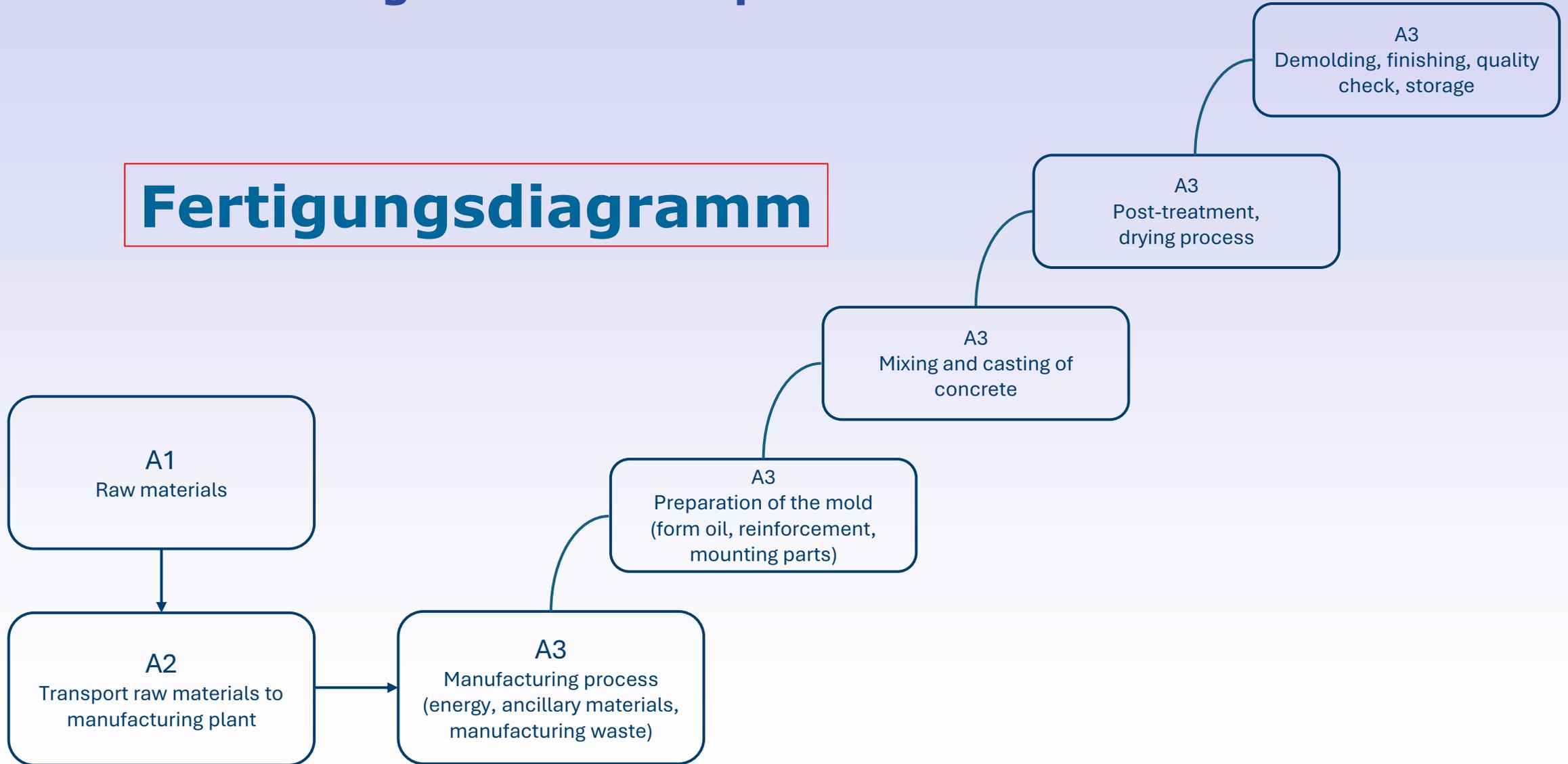
Impact category	Unit	A1	A2	A3	A1-A3
GWP – total ¹⁾	kg CO ₂ e	1,67E+01	6,27E-01	2,39E+00	1,97E+01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

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Ökobilanzierungen u. Umweltproduktdeklarationen

Fertigungsdiagramm



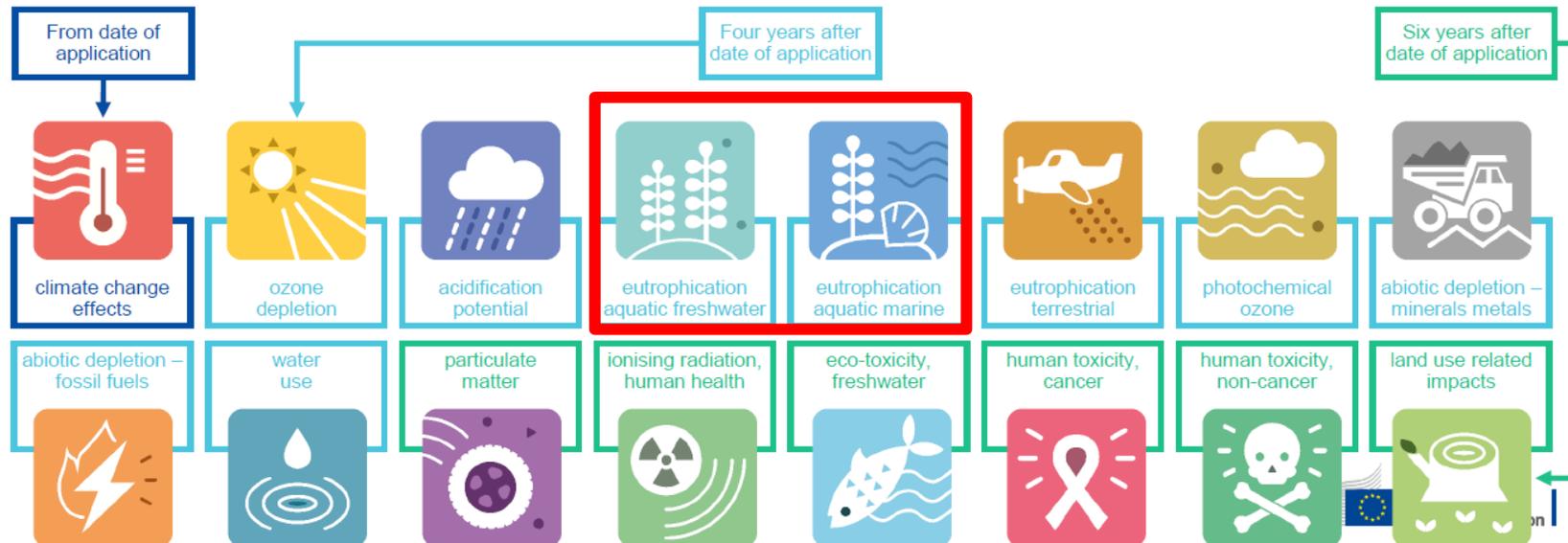
Ökobilanzierungen u. Umweltproduktdeklarationen

„CPR“ = „Construction Products Regulation“

➤ Bauproduktenverordnung

Env. sustainability essential characteristics

New CPR establishes by default, mandatory declaration of the following essential characteristics in three steps





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ENVIRONMENTAL IMPACT DATA

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GWP – fossil	kg CO ₂ e	1,67E+01	6,26E-01	2,39E+00	1,97E+01	MND	3,31E+00	1,39E+00	1,14E+00	1,54E-01	-1,18E+01								
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND									
GWP – LULUC	kg CO ₂ e	8,38E-03	2,31E-04	2,67E-04	8,88E-03	MND	MND	MND	MND	MND									
Ozone depletion pot.	kg CFC-11e	8,70E-07	1,44E-07	1,61E-07	1,18E-06	MND	MND	MND	MND	MND									
Acidification potential	mol H ⁺ e	6,83E-02	2,65E-03	7,36E-03	7,83E-02	MND	MND	MND	MND	MND									
EP-freshwater ²⁾	kg Pe	1,87E-04	5,13E-06	1,03E-04	2,95E-04	MND	1,10E-05	1,14E-05	3,23E-05	1,62E-06	-4,81E-04								
EP-marine	kg Ne	1,94E-02	7,88E-04	2,05E-03	2,22E-02	MND	1,52E-02	1,75E-03	3,62E-03	5,02E-04	-1,08E-02								
EP-terrestrial	mol Ne	2,32E-01	8,70E-03	2,31E-02	2,64E-01	MND	1,67E-01	1,93E-02	4,00E-02	5,52E-03	-1,29E-01								
POCP (“smog”) ³⁾	kg NMVOCe	5,62E-02	2,78E-03	6,88E-03	6,59E-02	MND	4,59E-02	6,17E-03	1,11E-02	1,61E-03	-5,94E-02								
ADP-minerals & metals ⁴⁾	kg Sbe	7,08E-05	1,47E-06	1,32E-06	7,36E-05	MND	1,68E-06	3,25E-06	2,29E-05	3,54E-07	-3,09E-04								
ADP-fossil resources	MJ	1,32E+02	9,41E+00	3,03E+01	1,71E+02	MND	4,45E+01	2,09E+01	1,88E+01	4,23E+00	-1,08E+02								
Water use ⁵⁾	m ³ e depr.	1,91E+00	4,21E-02	1,51E-01	2,10E+00	MND	1,20E-01	9,33E-02	1,92E-01	1,34E-02	-2,58E+00								

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Ökobilanzierungen u. Umweltproduktdeklarationen

Daten zur Erstellung einer Ökobilanz o. Umweltproduktdeklaration

- Mischungsberechnung der ausgewählten Betonrezepturen
- Lieferscheine der Ausgangsmaterialien und Bewehrung, ggf. Ökobilanzen/Umweltproduktdeklarationen der Ausgangsmaterialien
- Angabe der Distanzen u. Transportart: Anlieferung Ausgangsmaterialien
- Verbräuche aller Energieträger (ein Kalenderjahr) mit Erläuterung der Verwendung: Strom, Diesel, Heizöl, Gas etc.
- Gesamtproduktion Beton m^3 (ein Kalenderjahr): variiert je nach „declared unit“ der Umweltproduktdeklaration: m^3 , m^2 o. tonnen