

# ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804+A2 

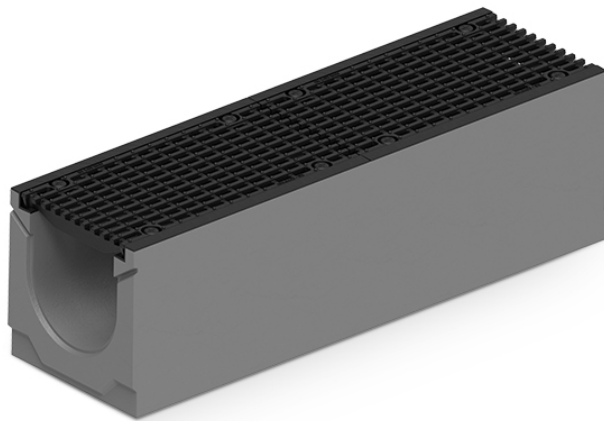
**BG-Graspointner GmbH**

**BG-CLASSIC, BGZ-S SV G NW 100, No. 0, with cast iron edge, without slope & cast iron bar grating NW 100, 500/147/25, MW 27/13, E600**



**GRASPOINTNER**  
Sustainable innovation.

**BG-CLASSIC**  
Drainage channels



**GRASPOINTNER**  
Sustainable innovation.

**Owner of the declaration**

BG-Graspointner GmbH  
Gessenschwandt 39  
4882 Oberwang  
Austria

**Product**

BG-CLASSIC, BGZ-S SV G NW 100, No. 0,  
with cast iron edge, without slope & cast  
iron bar grating NW 100, 500/147/25, MW  
27/13, E600

**Declared product / Functional unit**

1 m

**This declaration is based on Product  
Category Rules**

EN 15804:2012 + A2:2019,  
NPCR 020 PART B for concrete and  
concrete elements (v3.0)

**Program operator:**

EPD Global  
Majorstuen P.O. Box 5250  
N-0303 Oslo  
Norway

**Declaration number**

NEPD-10261-10261-2

**Registration number**

NEPD-10261-10261-2

**Issue date**

05.09.2025

**Valid to**

04.09.2030

**EPD Software**

Emidat EPD Tool v1.0.0

## General Information

### Product

BG-CLASSIC, BGZ-S SV G NW 100, No. 0, with cast iron edge, without slope & cast iron bar grating NW 100, 500/147/25, MW 27/13, E600

### Program Operator

EPD Global  
Majorstuen P.O. Box 5250  
N-0303 Oslo  
Norway  
Phone: +47 23 08 80 00  
Email: post@epd-norge.no

### Declaration Number

NEPD-10261-10261-2

### This declaration is based on Product Category Rules

EN 15804:2012 + A2:2019,  
NPCR 020 PART B for concrete and concrete elements  
(v3.0)

### Statements

The owner of the declaration shall be liable for the underlying information and evidence. EPD Norway shall not be liable with respect to manufacturer, life cycle assessment data and evidences.

### Functional unit

1 m with a reference service life of 20 years

### General information on verification of EPD from EPD tools

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Verification of each EPD is made according to EPDNorway's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Norway, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools.

### Verification of EPD tool

Charlotte Merlin, FORCE Technology  
(no signature required)

### Owner of the declaration

BG-Graspointner GmbH

### Contact person

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### Phone

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### Email

alexander.zeppetzauer@bg-graspointner.com

### Manufacturer

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Gessenschwandt 39  
4882 Oberwang, Austria

### Place of production

Kuchyňa , Slovakia

### Management system

ISO 9001, ISO 14001, ISO 50001

### Issue date

05.09.2025

### Valid to

04.09.2030

### Year of study

2023

### Comparability

EPDs of construction products may not be comparable if they do not comply with EN 15804 and are not seen in a building context. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database (including primary and secondary data).

### Development and verification of EPD

The declaration was created using the Emidat EPD tool v1.0, developed by Emidat GmbH. The EPD tool has been approved by EPD Norway.

Developer of EPD: Alexander Zeppetzauer

Reviewer of company-specific input data and EPD: Steffen Bernauer

### Approved



Håkon Hauan, CEO EPD-Norge

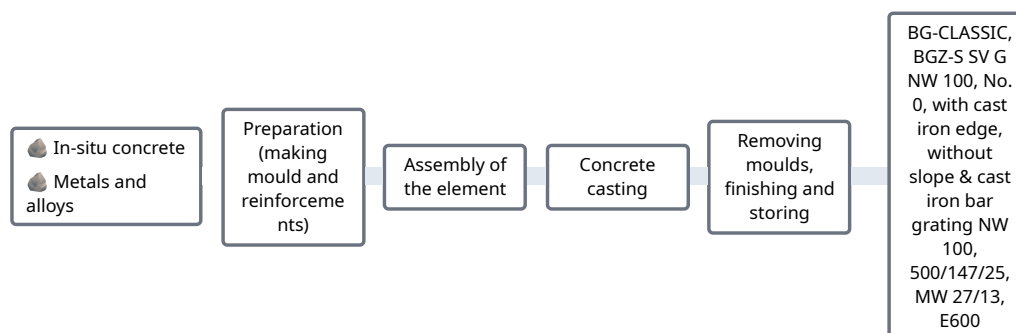
## Product

### Product description

Heavy-duty drainage channel BG-CLASSIC BGZ-S NW 100 (item code: 16500) made of concrete, with integrated Z-shaped cast frame & BG-CLASSIC, SV ductile iron bar grating NW 100, 500/147/25, MW 27/13, E600, quick-lock system (item code: 22756)

load class A15 – F900 kN, in accordance with EN1433 – CE-certified, channel joint with safety rebate, sealable, construction length 1000 mm, with or without 0.5% base slope,

building material class (fire protection class) A1 in accordance with EN13501 – non-combustible, 100% recyclable with U-A marking, delivery and installation in accordance with the manufacturer's installation instructions.



Drainage channels for collecting and draining surface water in areas used by pedestrians and/or vehicles.

### Product specification

Name of ingredient	Share of total weight	Country of origin
In-situ concrete	50 - 80 %	Slovakia
Metals and alloys	10 - 25 %	Various

### Technical data

	Unit	Value
Compressive Strength (Cylinder)	N / mm <sup>2</sup>	35.0
Density	kg / m <sup>3</sup>	2298.66
Surface exposed to air	m <sup>2</sup>	0.35
Total mass	kg	71.6

### Market

Slovakia

## LCA: Calculation rules

### Functional unit

1 m

### Reference service life

20 years

### Data quality

The foreground data are based on extensive and detailed data collection at the production site of the manufacturer, covering key processes such as raw material sourcing, formulation, and manufacturing. These foreground data are fully linked with corresponding datasets from the background database (ecoinvent 3.10) or with EN15804+A2-compliant EPDs, ensuring consistency, reliability, and maintaining alignment with the latest industry standards.

The overall data representativeness is rated as good with an overall score of 3.86/5, in accordance with EN 15804+A2 Annex E guidance on data quality assessment, considering geographical, technical, and temporal representativeness.

### System boundaries (X=included, MND=module not declared)

	Production			Installation		Use stage							End-of-Life				Next product system
	Raw material supply	Transport	Manufacturing	Transport	Installation Process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Demolition	Transport	Waste Processing	Disposal	Benefits and loads beyond the system boundary
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	x	x	x	x	x	x	MND	MND	MND	MND	MND	MND	x	x	x	x	x
Geography			SK	SK	SK	SK	MND	MND	MND	MND	MND	MND	SK	SK	SK	SK	SK

For the geographies modeled in A1 and A2, refer to *Product specification*.

Type of EPD: Cradle to gate with options A4, A5, B1, C1, C2, C3, C4 and D

#### Stage of Material Production and Construction

Module A1: Extraction and processing of raw materials

Module A2: Transportation of raw materials to the plant

Module A3: Precast concrete production at the plant and waste treatment

Module A4: Transportation to installation site

Module A5: Includes all processes associated with the installation of the drainage channels, including the production and transportation of additional materials like concrete, sealings and reinforcement steel dependent on the type of installation according to EN 1433

#### Use Stage

Module B1: Carbonation during the utilization phase

#### Disposal Stage

Module C1: Demolition/Dismantling

Module C2: Transportation of concrete demolition waste for processing

Module C3: Sorting of waste components and recycling of concrete and other contained components

Module C4: Landfilling of concrete and other contained components

#### Credits and burdens outside the system boundaries

Module D: Credits and burdens from recycling as a replacement for primary materials

### Cut-off criteria

Environmental impacts of the following processes are considered to be negligible: minor auxiliary materials used during installation (sealants, adhesives, or fasteners), minor water use for cleaning precast concrete elements .

## Allocation

Foreground inventory data (energy and fuels, ancillary materials, emissions and waste) was collected at the production-process level. Using the total output of the production process in 2023, these flows are allocated to one declared unit based on mass.

## LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

Transport to the building site (A4)	Value	Unit
Transported mass	72.41	kg
Truck: Distance	300.00	km
Truck: Energy demand	1.58	MJ / t*km
Truck: Activity	transport, freight, lorry >32 metric ton, EURO6	-
Truck: Capacity utilization	53.30	%

Installation into the building (A5)	Value	Unit
Treatment of Polypropylene strapping bands waste	Incineration	
Treatment of Softwood waste	Incineration	
Treatment of Wooden pallets waste	Reuse	
Pavement	Asphalt	-
Type	M	-
Class	D 400	-
Concrete	0.16	m <sup>3</sup>
Steel reinforcement	0	kg
Bitumen seal	6.60	kg

Use of the installed product (B1)	Value	Unit
Reference use period	20.00	years
Application	Engineering structures, exposed to rain	
Degree of carbonation (Dc)	0.85	-
Cement absorption factor	0.49	kg CO <sub>2</sub> / kg Cement
k-factor	1.60	mm / √year
Correction factor	1.00	-
Surface area of concrete	0.35	m <sup>2</sup>

Calculation of carbonization according to EN 16757. k-factor results from the concrete's compressive strength and its application. The cement absorption factor (maximum theoretical CO<sub>2</sub> uptake) depends on the average clinker content in cement. The correction factor results from cement substitutes in the recipe.

Demolition (C1)	Value	Unit
Diesel required to demolish 1 kg of concrete	0.06	MJ / kg
PM 10 emissions during the demolishment of 1 kg of concrete	6.00e-05	kg / kg
PM 2.5 emissions during the demolishment of 1 kg of concrete	1.70e-05	kg / kg

Transport to the waste facility (C2)	Value	Unit
Mass to recycling	18.62	kg
Mass to landfill	52.98	kg
Distance to recycling by truck	50.00	km
Distance to landfill by truck	50.00	km
Truck: Activity	transport, freight, lorry >32 metric ton, EURO6	-
Truck: Capacity utilization	53.30	%
Truck: Distance	50.00	km
Truck: Energy demand	1.58	MJ / t*km

Waste processing (C3)	Value	Unit
Material for recycling	18.62	kg

Carbonation during waste processing is not considered. Recycling rate for concrete of 26% reflects the modeled country. Source: <https://circabc.europa.eu/ui/group/636f928d-2669-41d3-83db-093e90ca93a2/library/49d4733a-ff3e-4f66-8308-cf4bae0d6fa2/details>.

Disposal (C4)	Value	Unit
Material for landfill	52.98	kg

Reuse, recovery and/or recycling potentials (D)	Value	Unit
Amount of secondary material that the system takes in	7.64	kg
Substitution of gravel	16.66	kg
Substitution of electrical energy production	0.04	MJ
Substitution of thermal energy production	0.09	MJ

Calculation of benefits and loads per EN 15804+A2.

## LCA: Results

### Core environmental impact indicators

Indicator	Unit	A1-3	A4	A5	B1	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> -eq.	3.08e+01	2.25e+00	5.52e+01	-1.34e-02	4.39e-01	3.71e-01	1.23e-01	3.56e-01	-4.53e-02
GWP-fossil	kg CO <sub>2</sub> -eq.	3.07e+01	2.25e+00	5.21e+01	-1.34e-02	4.39e-01	3.71e-01	1.14e-01	3.31e-01	-4.43e-02
GWP-biogenic	kg CO <sub>2</sub> -eq.	1.13e-01	1.13e-03	3.12e+00	0	4.38e-05	1.86e-04	8.76e-03	2.49e-02	-9.69e-04
GWP-luluc	kg CO <sub>2</sub> -eq.	5.25e-02	7.99e-04	7.39e-03	0	3.81e-05	1.32e-04	9.92e-06	1.72e-04	-2.59e-05
ODP	kg CFC-11-Eq	2.14e-07	4.69e-08	4.44e-07	0	6.71e-09	7.73e-09	1.75e-09	9.58e-09	-8.04e-10
AP	mol H+-Eq	1.44e-01	5.31e-03	1.23e-01	0	3.96e-03	8.76e-04	1.03e-03	2.35e-03	-3.18e-04
EP-freshwater	kg P-Eq	6.96e-03	1.58e-04	6.48e-03	0	1.28e-05	2.61e-05	3.32e-06	2.75e-05	-7.14e-06
EP-marine	kg N-Eq	3.68e-02	1.39e-03	3.41e-02	0	1.84e-03	2.30e-04	4.78e-04	8.95e-04	-1.19e-04
EP-terrestrial	mol N-Eq	4.00e-01	1.51e-02	3.94e-01	0	2.01e-02	2.48e-03	5.23e-03	9.77e-03	-1.38e-03
POCP	kg NMVOC-Eq	1.26e-01	9.22e-03	1.40e-01	0	6.00e-03	1.52e-03	1.56e-03	3.50e-03	-4.01e-04
ADPE	kg Sb-Eq	5.67e-05	6.43e-06	2.52e-04	0	1.57e-07	1.06e-06	4.09e-08	5.26e-07	-3.49e-07
ADPF	MJ, net calorific value	2.87e+02	3.38e+01	4.34e+02	0	5.74e+00	5.57e+00	1.49e+00	8.12e+00	-7.17e-01
WDP	m <sup>3</sup> world Eq deprived	4.22e+00	1.70e-01	1.03e+01	0	1.40e-02	2.80e-02	3.65e-03	2.27e-02	-2.59e-02

**GWP-total:** Global Warming Potential - total **GWP-fossil:** Global warming potential - fossil **GWP-biogenic:** Global Warming Potential - biogenic **GWP-luluc:** Global Warming Potential - luluc **ODP:** Depletion potential of the stratospheric ozone layer **AP:** Acidification potential, Accumulated Exceedance **EP-freshwater:** Eutrophication potential - freshwater **EP-marine:** Eutrophication potential - marine **EP-terrestrial:** Eutrophication potential - terrestrial **POCP:** Photochemical Ozone Creation Potential **ADPE:** Abiotic depletion potential - non-fossil resources **ADPF:** Abiotic depletion potential - fossil resources **WDP:** Water (user) deprivation potential

### Additional indicators

Indicator	Unit	A1-3	A4	A5	B1	C1	C2	C3	C4	D
PM	disease incidence	2.08e-06	2.19e-07	1.20e-06	0	6.38e-07	3.61e-08	1.68e-07	5.34e-08	-7.94e-09
IRP	kBq U235-Eq	1.63e+00	4.10e-02	1.61e+00	0	2.57e-03	6.76e-03	6.68e-04	5.18e-03	-1.01e-02
ETP-fw	CTUe	6.18e+02	8.00e+00	7.83e+01	0	8.13e-01	1.32e+00	2.12e-01	1.11e+00	-2.59e-01
HTP-c	CTUh	2.04e-06	1.44e-08	8.38e-08	0	1.72e-09	2.37e-09	4.46e-10	1.50e-09	-5.56e-10
HTP-nc	CTUh	2.54e-06	2.23e-08	3.26e-07	0	7.79e-10	3.67e-09	2.03e-10	1.46e-09	-3.63e-10
SQP	dimensionless	9.90e+01	3.40e+01	1.25e+02	0	4.02e-01	5.60e+00	1.05e-01	1.60e+01	-1.10e+00

**PM:** Potential incidence of disease due to PM emissions **IRP:** Potential Human exposure efficiency relative to U235 **ETP-fw:** Potential Comparative Toxic Unit for ecosystems **HTP-c:** Potential Comparative Toxic Unit for humans - cancer effects **HTP-nc:** Potential Comparative Toxic Unit for humans - non-cancer effects **SQP:** Potential Soil quality index

**IRP:** 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.

**ETP-fw, HTP-c, HTP-nc and SQP:** 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 experienced with these indicators.

## Use of resources

Indicator	Unit	A1-3	A4	A5	B1	C1	C2	C3	C4	D
PERE	MJ	1.49e+01	5.36e-01	3.52e+01	0	3.51e-02	8.83e-02	9.13e-03	7.53e-02	-1.69e-01
PERM	MJ	6.38e-01	0	-3.21e-01	0	0	0	-8.25e-02	0	0
PERT	MJ	1.55e+01	5.36e-01	3.49e+01	0	3.51e-02	8.83e-02	-7.34e-02	7.53e-02	-1.69e-01
PENRE	MJ	2.86e+02	3.38e+01	4.34e+02	0	5.74e+00	5.57e+00	1.49e+00	8.13e+00	-7.17e-01
PENRM	MJ	5.77e-01	0	-1.27e-01	0	0	0	-1.17e-01	0	0
PENRT	MJ	2.87e+02	3.38e+01	4.34e+02	0	5.74e+00	5.57e+00	1.38e+00	8.13e+00	-7.17e-01
SM	kg	7.64e+00	0	0	0	0	0	0	0	1.67e+01
RSF	MJ	1.31e+00	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	1.76e-01	4.91e-03	6.84e-01	0	3.73e-04	8.09e-04	9.70e-05	8.43e-03	-2.38e-02

**PERE:** Primary energy resources - renewable: use as energy carrier **PERM:** Primary energy resources - renewable: used as raw materials **PERT:** Primary energy resources - renewable: total **PENRE:** Primary energy resources - non-renewable: use as energy carrier **PENRM:** Primary energy resources - non-renewable: used as raw materials **PENRT:** Primary energy resources - non-renewable: total **SM:** Use of secondary material **RSF:** Renewable secondary fuels **NRSF:** Non-renewable secondary fuels **FW:** Net use of fresh water

## Waste flows

Indicator	Unit	A1-3	A4	A5	B1	C1	C2	C3	C4	D
HWD	kg	3.08e+00	4.91e-02	7.97e-01	0	6.41e-03	8.09e-03	1.67e-03	9.03e-03	-2.45e-03
NHWD	kg	3.74e+01	9.84e-01	3.85e+01	0	8.76e-02	1.62e-01	2.28e-02	5.32e+01	-5.05e-02
RWD	kg	4.01e-04	1.01e-05	3.73e-04	0	6.30e-07	1.67e-06	1.64e-07	1.26e-06	-2.27e-06

**HWD:** Hazardous waste disposed **NHWD:** Non hazardous waste disposed **RWD:** Radioactive waste disposed

## Output flows

Indicator	Unit	A1-3	A4	A5	B1	C1	C2	C3	C4	D
CRU	kg	0	0	7.90e-01	0	0	0	0	0	0
MFR	kg	3.57e+00	0	0	0	0	0	1.86e+01	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	4.29e-02	0	0	0	0	0	0
EET	MJ	0	0	8.51e-02	0	0	0	0	0	0

**CRU:** Components for re-use **MFR:** Materials for recycling **MER:** Materials for energy recovery **EEE:** Exported electrical energy **EET:** Exported thermal energy

Name	Value	Unit
Biogenic carbon content in product	9.17e-03	kg C
Biogenic carbon content in accompanying packaging	9.89e-03	kg C

## Additional requirements

### Greenhouse gas emissions from the use of electricity in the manufacturing phase

Electricity consumption in the manufacturing phase is composed from the source below. Electricity is represented by data in ecoinvent 3.10 regionalised for Slovakia.

Electricity	Unit	Value
Electricity from grid	kg CO <sub>2</sub> -eq. / kWh	0.25

### Dangerous substances

The product contains no hazardous substances given by the REACH Candidate List or the Norwegian Priority List.

## Additional environmental information







### Additional environmental impact indicators required in NPCR Part A for construction products

Indicator	Unit	A1-3	A4	A5	B1	C1	C2	C3	C4	D
GWP-IOBC	kg CO <sub>2</sub> -eq.	3.07e+01	2.25e+00	5.21e+01	-1.34e-02	4.39e-01	3.71e-01	1.14e-01	3.32e-01	-4.44e-02

**GWP-IOBC:** Global Warming Potential - Instantaneous oxidation of biogenic carbon

## Bibliography

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DIN EN ISO 14040:2021-02	Environmental management - Life cycle assessment - Principles and framework
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EN 15804:2012+A2:2019	Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
DIN CENTR 15941:2010-11	Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data
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ISO 21930:2017-07	Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services
ecoinvent v3.10	ecoinvent, Zurich, Switzerland, database version 3.10
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