

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804+A2 

Sika Services AG
Sika MonoTop®-4012 ES



Owner of the declaration

Sika Services AG
Tüffenwies 16
8048 Zürich
Switzerland

Product

Sika MonoTop®-4012 ES

Declared product / Declared unit

1 kg of applied mortar

This declaration is based on Product

Category Rules

EN 15804:2012 + A2:2019,
NPCR 009 Part B for Technical chemical
Products for Construction ,
NPCR Part A:2021

Program operator:

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

Declaration number

NEPD-10805-10805-2

Registration number

NEPD-10805-10805-2

Issue date

19.12.2025

Valid to

18.12.2030

EPD Software

Emidat Platform v1.0.0

General Information

Product

Sika MonoTop®-4012 ES

Program Operator

EPD Global
 Majorstuen P.O. Box 5250
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 Norway
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Declaration Number

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EN 15804:2012 + A2:2019,
 NPCR 009 Part B for Technical chemical Products for
 Construction ,
 NPCR Part A:2021

Statements

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

Declared unit

1 kg of applied mortar with a reference service life of 50 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 EPD Global'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 Global, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD Global'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

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Place of production

Cabanillas del Campo, Spain

Management system

ISO 9001 , ISO 14001 , ISO 45001

Issue date

19.12.2025

Valid to

18.12.2030

Year of study

2024

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 Global.

Developer of EPD: Haizea Magallon

Reviewer of company-specific input data and EPD:
 Katherine Agapitos

Approved



Håkon Hauan, The Norwegian EPD Foundation

Product

Product description

Sika MonoTop®-4012 ES is a one-component repair mortar, fiber-reinforced and with low shrinkage. It contains recycled materials in its composition and helps reduce carbon-footprint values.



Sika MonoTop®-4012 ES can only be used by experienced professionals. It is suitable for the repair of all types of reinforced concrete structures and components, including building structures, civil engineering structures, marine structures, and dams. It is also used for structures that require an R4, R3, R2, or R1 class mortar. Suitable for both interior and exterior use.

Product specification

Name of ingredient	Share of total weight	Country of origin
Aggregates	50 - 80 %	Spain
Cement	10 - 25 %	Various
Ceramics	0 - 2 %	Spain
Chemicals	0 - 2 %	Various
Fillers	2 - 10 %	Spain
Lime	0 - 2 %	Spain
Plastics	0 - 2 %	Spain
Supplementary cementitious materials	10 - 25 %	Spain

Technical data

	Unit	Value
Gross density	kg / m ³	2100
Mixing water demand	l / kg	0.15

Market

Spain

Recipients

B2B

LCA: Calculation rules

Declared unit

1 kg of applied mortar

Reference service life

50 years

This value represents a conventional reference lifespan, not a guaranteed performance duration, and assumes normal exposure conditions, adequate design, and routine maintenance.

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 4.00/5, 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	
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	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x
Geography			ES	ES	ES	MND	MND	MND	MND	MND	MND	MND	ES	ES	ES	ES	ES

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

Type of EPD: Cradle to gate with options, modules A4-5, C1-C4, and D

Stage of Material Production and Construction

Module A1: Extraction and processing of mortar raw materials

Module A2: Transportation of raw materials to the mortar plant

Module A3: Mortar production at the plant and waste treatment

Module A4: Transportation to the construction site

Module A5: Includes processes associated with installation of the mortar, as well as the production, transportation, and treatment of unused mortar

Disposal Stage

Module C1: Demolition/Dismantling

Module C2: Transportation of demolition waste for processing

Module C3: Recycling of mortar waste as part of its carrier material. No separation of the mortar waste from the carrier material is possible. Concrete is used as the carrier material

Module C4: Final disposal of mortar waste in sanitary landfill together with carrier material. No separation of the mortar waste from the carrier material is possible. Concrete is used as the carrier material

Credits and burdens outside the system boundaries

Module D: Credits and burdens for the use of production waste in A3 or packaging waste in A5 as a secondary fuel or thermal/electrical energy generation. Credits and burdens from the use of mortar waste as a replacement for primary materials (aggregates), as part of its carrier material (concrete).

Cut-off criteria

No cut-offs were applied.

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 2024, these flows are allocated to the reference product 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: Product and packaging	1.02	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 packaging waste	Recycling	
Treatment of packaging waste	Reuse	
Treatment of packaging waste	Incineration	
Installation loss	5.00	%
Water	0.15	kg
Product mass after installation	1.15	kg

During installation, water is added to the product. For the remaining lifecycle stages, this LCA considers the total mass of the product including the water.

Demolition (C1)	Value	Unit
Diesel for dismantling	0.07	MJ
PM 2.5 emissions	1.91e-05	kg
PM 10 emissions	7.29e-05	kg

Transport to the waste facility (C2)	Value	Unit
Mass to landfill	1.03	kg
Mass to recycling	0.11	kg
Distance to landfill	50.00	km
Distance to recycling	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	0.11	kg
Recycling rate	10.00	%

Disposal (C4)	Value	Unit
Material for landfill	1.03	kg

Reuse, recovery and/or recycling potentials (D)	Value	Unit
Amount of secondary material that the system takes in	0.11	kg
Substitution of gravel	0.10	kg
Substitution of electrical energy production	5.13e-03	MJ
Substitution of thermal energy production	0.02	MJ

Calculation of benefits and loads per EN 15804+A2.

LCA: Results

The following results are based on the market-based electricity approach applied to the foreground system (A3). Further details on electricity data are provided in the Additional Requirements section.

Core environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	2.67e-01	3.16e-02	2.35e-02	7.05e-03	5.96e-03	5.08e-04	6.52e-03	-3.60e-03
GWP-fossil	kg CO ₂ -eq.	2.66e-01	3.15e-02	1.97e-02	7.05e-03	5.95e-03	5.04e-04	6.47e-03	-3.58e-03
GWP-biogenic	kg CO ₂ -eq.	6.39e-04	1.58e-05	3.82e-03	7.04e-07	2.99e-06	4.31e-06	3.88e-05	-2.19e-05
GWP-luluc	kg CO ₂ -eq.	5.76e-04	1.12e-05	3.22e-05	6.13e-07	2.11e-06	4.38e-08	3.36e-06	-5.32e-06
ODP	kg CFC-11-Eq	2.14e-09	6.57e-10	2.34e-10	1.08e-10	1.24e-10	7.70e-12	1.87e-10	-1.49e-10
AP	mol H+-Eq	7.46e-04	7.45e-05	5.85e-05	6.36e-05	1.41e-05	4.54e-06	4.59e-05	-9.72e-06
EP-freshwater	kg P-Eq	4.22e-05	2.22e-06	3.27e-06	2.05e-07	4.19e-07	1.47e-08	5.37e-07	-5.02e-07
EP-marine	kg N-Eq	2.05e-04	1.95e-05	1.60e-05	2.95e-05	3.69e-06	2.11e-06	1.75e-05	-2.37e-06
EP-terrestrial	mol N-Eq	2.15e-03	2.11e-04	1.63e-04	3.23e-04	3.99e-05	2.31e-05	1.91e-04	-2.58e-05
POCP	kg NMVOC-Eq	7.15e-04	1.29e-04	5.74e-05	9.64e-05	2.44e-05	6.88e-06	6.83e-05	-1.72e-05
ADPE	kg Sb-Eq	5.47e-06	9.01e-08	3.56e-07	2.53e-09	1.70e-08	1.80e-10	1.03e-08	-1.96e-08
ADPF	MJ, net calorific value	2.13e+00	4.74e-01	3.82e-01	9.22e-02	8.94e-02	6.59e-03	1.59e-01	-9.31e-02
WDP	m ³ world Eq deprived	4.63e-02	2.38e-03	4.04e-02	2.26e-04	4.49e-04	1.61e-05	4.44e-04	-1.05e-03

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-A3	A4	A5	C1	C2	C3	C4	D
PM	disease incidence	8.14e-09	3.07e-09	8.48e-10	1.04e-08	5.80e-10	9.84e-10	1.04e-09	-1.02e-10
IRP	kBq U235-Eq	1.51e-02	5.75e-04	1.42e-02	4.13e-05	1.09e-04	2.95e-06	1.01e-04	-6.17e-04
ETP-fw	CTUe	1.84e+00	1.12e-01	1.47e-01	1.31e-02	2.12e-02	9.33e-04	2.17e-02	-9.40e-03
HTP-c	CTUh	2.86e-09	2.02e-10	2.28e-10	2.76e-11	3.81e-11	1.97e-12	2.92e-11	-1.20e-11
HTP-nc	CTUh	1.91e-09	3.12e-10	2.19e-10	1.25e-11	5.89e-11	8.93e-13	2.85e-11	-2.10e-11
SQP	dimensionless	1.50e+00	4.76e-01	2.06e-01	6.46e-03	8.99e-02	4.61e-04	3.12e-01	-1.32e-02

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-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	2.57e-01	7.51e-03	2.64e-01	5.64e-04	1.42e-03	4.03e-05	1.47e-03	-5.95e-03
PERM	MJ	2.50e-02	0.00e+00	-2.31e-02	0.00e+00	0.00e+00	-6.06e-05	0.00e+00	0.00e+00
PERT	MJ	2.82e-01	7.51e-03	2.41e-01	5.64e-04	1.42e-03	-2.03e-05	1.47e-03	-5.95e-03
PENRE	MJ	1.91e+00	4.74e-01	3.71e-01	9.22e-02	8.94e-02	6.59e-03	1.59e-01	-6.05e-02
PENRM	MJ	2.23e-01	0.00e+00	-9.05e-02	0.00e+00	0.00e+00	-1.21e-02	0.00e+00	-3.26e-02
PENRT	MJ	2.13e+00	4.74e-01	2.80e-01	9.22e-02	8.94e-02	-5.52e-03	1.59e-01	-9.31e-02
SM	kg	1.14e-01	0.00e+00	5.70e-03	0.00e+00	0.00e+00	0.00e+00	0.00e+00	1.04e-01
RSF	MJ	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00
NRSF	MJ	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00
FW	m ³	2.00e-03	6.88e-05	1.14e-03	5.99e-06	1.30e-05	4.28e-07	1.65e-04	-1.71e-04

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-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	1.00e-03	0.00e+00	5.00e-05	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00
NHWD	kg	0.00e+00	0.00e+00	5.32e-02	0.00e+00	0.00e+00	0.00e+00	1.03e+00	0.00e+00
RWD	kg	0.00e+00							

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

Output flows

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
CRU	kg	0.00e+00	0.00e+00	1.14e-02	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00
MFR	kg	2.73e-02	0.00e+00	2.14e-03	0.00e+00	0.00e+00	1.15e-01	0.00e+00	0.00e+00
MER	kg	0.00e+00							
EEE	MJ	5.97e-04	0.00e+00	4.53e-03	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00
EET	MJ	8.04e-03	0.00e+00	9.64e-03	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00

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	1.18e-05	kg C
Biogenic carbon content in accompanying packaging	6.89e-04	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 sources below. This EPD follows the market-based approach.

Electricity	Quantity [kWh]	Emission Factor [kg CO ₂ e/kWh]
electricity production, wind, >3MW turbine, onshore (ES)	0.02	0.03
electricity production, hydro, pumped storage (ES)	0.01	0.33

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-A3	A4	A5	C1	C2	C3	C4	D
GWP-IOBC	kg CO ₂ -eq.	2.66e-01	3.16e-02	1.98e-02	7.05e-03	5.96e-03	5.04e-04	6.48e-03	-3.59e-03

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

Bibliography

CEN/TR 15941:2010	Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data
EN 15804:2012+A2:2019	Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
EN 15942:2022-04	Sustainability of construction works - Environmental product declarations - Communication format business-to-business
ISO 14025:2011-10	Environmental labels and declarations - Type III environmental declarations - Principles and procedures
ISO 14040:2021-02	Environmental management - Life cycle assessment - Principles and framework
ISO 14044:2021-02	Environmental management - Life cycle assessment - Requirements and guidelines
EF 3.1	Environmental Footprint (EF) Life Cycle Impact Assessment method - Characterisation Factors version 3.1, European Commission, Joint Research Centre (JRC)
ecoinvent 3.10	ecoinvent, Zurich, Switzerland, database version 3.10
NPCR 009:2021	Product category rules, Part B: Technical chemical products for the building and construction industry. Issue date: 06.10.2021; validity extended to 30.06.2026.
NPCR Part A:2021	Construction products and services, Version 2.0. Issue date: 24.03.2021; validity extended to 24.03.2026.

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