

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804+A2 

Sika Australia Pty Ltd
Sika® Sigunit® L-5401 AF



Owner of the declaration

Sika Australia Pty Ltd
55 Elizabeth Street
2164 Wetherill Park
Australia

Product

Sika® Sigunit® L-5401 AF

Declared product / Declared unit

1 kg

This declaration is based on Product Category Rules

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

Program operator:

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

Declaration number

NEPD-12126-12126-2

Registration number

NEPD-12126-12126-2

Issue date

25.08.2026

Valid to

24.08.2031

EPD Software

Emidat Platform v1.0.0

General Information

Product

Sika® Sigunit® L-5401 AF

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-12126-12126-2

This declaration is based on Product Category Rules

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

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

General information on verification of EPD from EPD tools

Independent verification of data, other environmental information and the declaration according to ISO 14025:2011-10, § 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

Independent third-party verification based on the verification of the EPD tool, background data and test-EPD in accordance with EPD Global's procedures and guidelines for verification and approval of EPD tools. Third-party verifier: Charlotte Merlin, FORCE Technology

Owner of the declaration

Sika Australia Pty Ltd

Contact person

sustainability@au.sika.com

Phone

+61 2 9725 1145

Email

sustainability@au.sika.com

Manufacturer

Sika Australia Pty Ltd
55 Elizabeth Street
2164 Wetherill Park, Australia

Place of production

Wetherill Park, Australia

Management system

ISO 14001 , ISO 45001 , ISO 9001

Issue date

25.08.2026

Valid to

24.08.2031

Year of study

2025

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).

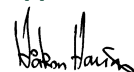
Development and verification of EPD

The declaration was created using the Emidat EPD tool v1.0, developed by Emidat GmbH which is third-party verified and approved as a Reference Flow Tool with internal review under administration and surveillance by EPD Global under provisions stated in general information on verification of EPD from EPD tools.

Developer of EPD: Nam Le

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

Approved



Håkon Hauan, The Norwegian EPD Foundation

Product

Product description

Sika® Sigunit® L-5401 AF is a high-performance liquid, alkali-free, set accelerator for shotcrete.

Application description

Sika® Sigunit® L-5401 AF is suitable for both dry- and wet-spraying processes and is used for excavation stabilization in tunnelling and mining, rock, slope and trench stabilization, and high-quality shotcrete lining applications.

Production process



Product specification

Name of ingredient	Share of total weight	Country of origin
Chemicals	0 - 2 %	China
Composite	50 - 70 %	Various
Water	30 - 50 %	Australia

Technical data

	Unit	Value
Density	g / ml	1.44

Market

Australia

Recipients

B2B

LCA: Calculation rules

Declared unit

1 kg

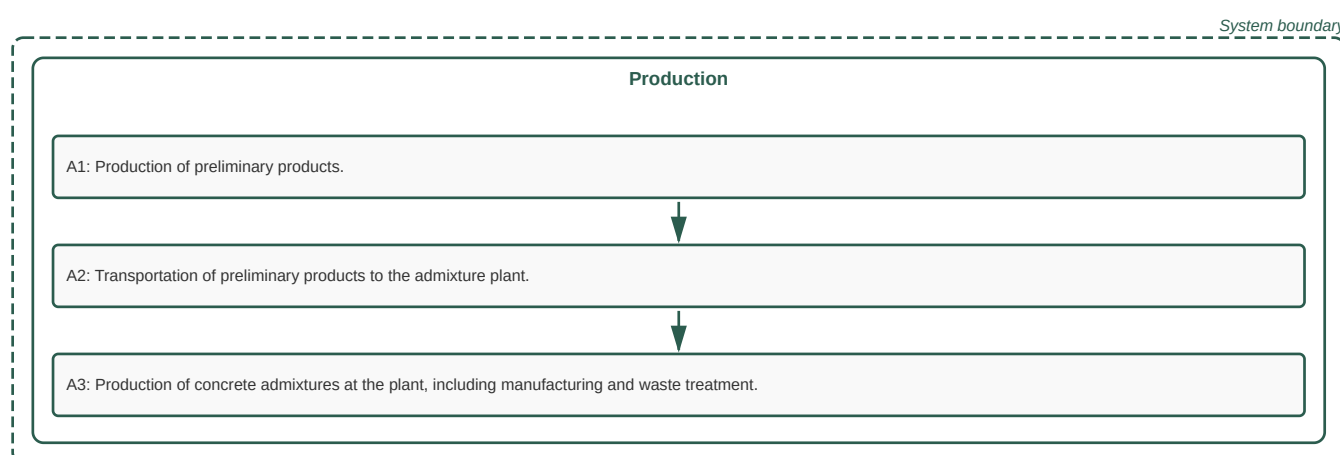
Product lifetime

Not declared

Reference service life

Not declared

System boundary



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.

The following table discloses all processes or activities assessed with very poor or poor data representativeness according to EN 15804+A2, as well as those assessed as fair that contribute more than 30 % to any core impact indicator in A1–A3:

Element	Minimal Representativeness	Source	Year
Recycling	Very poor	ecoinvent 3.10	2023
Chemicals	Poor	ecoinvent 3.10	2023
Composite	Poor	ecoinvent 3.10	2023
Incineration	Poor	ecoinvent 3.10	2023
Landfill	Poor	ecoinvent 3.10	2023
Packaging	Poor	ecoinvent 3.10	2023
Plastic bucket	Poor	ecoinvent 3.10	2023
Plastic film	Poor	ecoinvent 3.10	2023
Wastewater	Poor	ecoinvent 3.10	2023
Water	Poor	ecoinvent 3.10	2023

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	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Geography			AU	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

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

Type of EPD: Cradle to gate

Stage of Material Production and Construction

Module A1: Production of preliminary products.

Module A2: Transportation of preliminary products to the admixture plant.

Module A3: Production of concrete admixtures at the plant, including manufacturing and waste treatment.

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. Mass-based allocation was applied to allocate the total output of the production process in 2025 to the reference product.

Key assumptions and estimates

Production process flows are allocated to the reference product, as described under allocation. The mass-based allocation assumes a uniform distribution of production impacts across co-products. Foreground inventory data is checked for consistency of production process, to ensure the validity of the allocated results.

LCA: Results

The following results are based on the location-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
GWP-total	kg CO ₂ -eq.	4.04e-01
GWP-fossil	kg CO ₂ -eq.	4.03e-01
GWP-biogenic	kg CO ₂ -eq.	1.78e-04
GWP-luluc	kg CO ₂ -eq.	3.30e-04
ODP	kg CFC-11-Eq	4.20e-09
AP	mol H ⁺ -Eq	5.78e-03
EP-freshwater	kg P-Eq	2.01e-04
EP-marine	kg N-Eq	8.74e-04
EP-terrestrial	mol N-Eq	9.42e-03
POCP	kg NMVOC-Eq	2.75e-03
ADPE	kg Sb-Eq	1.48e-05
ADPF	MJ, net calorific value	4.51e+00
WDP	m ³ world Eq deprived	1.55e-01

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
PM	disease incidence	3.58e-08
IRP	kBq U235-Eq	2.12e-02
ETP-fw	CTUe	3.21e+00
HTP-c	CTUh	1.70e-09
HTP-nc	CTUh	1.33e-08
SQP	dimensionless	1.49e+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, 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
PERE	MJ	3.96e-01
PERM	MJ	0.00e+00
PERT	MJ	3.96e-01
PENRE	MJ	4.50e+00
PENRM	MJ	6.35e-04
PENRT	MJ	4.50e+00
SM	kg	0.00e+00
RSF	MJ	0.00e+00
NRSF	MJ	0.00e+00
FW	m ³	4.43e-03

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
HWD	kg	4.42e-03
NHWD	kg	1.19e-02
RWD	kg	0.00e+00

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

Output flows

Indicator	Unit	A1-A3
CRU	kg	0.00e+00
MFR	kg	7.95e-03
MER	kg	0.00e+00
EEE	MJ	1.72e-02
EET	MJ	9.94e-02

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	0.00e+00	kg C
Biogenic carbon content in accompanying packaging	0.00e+00	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 location-based approach.

Approach	Electricity	Quantity [kWh]	Emission Factor [kg CO ₂ e/kWh]
location-based	ecoinvent: market for electricity, medium voltage (AU)	0.02	0.94
market- and location-based	ecoinvent: electricity production, photovoltaic, 3kWp slanted-roof installation, single-Si, panel, mounted (AU)	2.53e-03	0.07

Dangerous substances

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

Additional environmental information

Secondary content

The product contains 0 % secondary material. Secondary material includes recycled, recovered and by-product content.

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

Indicator	Unit	A1-A3
GWP-IOBC	kg CO ₂ -eq.	4.04e-01

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 Part A:2021	Construction products and services, Version 2.0. Issue date: 24.03.2021; validity extended to 31.12.2026.
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.

 epd-global Powered by EPD-Norway	Program Operator	Phone	+47 23 08 80 00
	EPD Global	Email	post@epd-norge.no
	P.O. Box 5250 Majorstuen, N-0303 Oslo Norway	Web	www.epd-global.no
 epd-global Powered by EPD-Norway	Publisher	Phone	+47 23 08 80 00
	EPD Global	Email	post@epd-norge.no
	P.O. Box 5250 Majorstuen, N-0303 Oslo Norway	Web	www.epd-global.no
	Owner of the declaration	Phone	+61 2 9725 1145
	Sika Australia Pty Ltd	Email	sustainability@au.sika.com
	55 Elizabeth Street, 2164 Wetherill Park Australia	Web	https://aus.sika.com/
	Author of the life cycle assessment	Phone	+61 2 9725 1145
	Sika Australia Pty Ltd	Email	sustainability@au.sika.com
	55 Elizabeth Street, 2164 Wetherill Park Australia	Web	https://aus.sika.com/
	ECO Platform	Web	www.eco-platform.org
	ECO Portal	Web	ECO Portal
 EMIDAT	Developer of EPD generator	Phone	+49 176 56 96 77 91
	Emidat GmbH	Email	epd@emidat.com
	Sandstraße 33, 80335 München Germany	Web	www.emidat.com