

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Isotekk 5500 SEP, Svejseoverlag 5500



Owner of the declaration:

Isola AS

Produkt:

Isotekk 5500 SEP, Svejseoverlag 5500

Declared unit:

1 m²

This declaration is based on Product Category Rules:

EN 15804:2012+A2:2019 serves as core PCR
NPCR 022:2022 Part B for Roof waterproofing

Program operator:

EPD-Global

Declaration number:

NEPD-4148-3365-EN

Issue date:

30.12.2022

Latest revision

v2.0 Date: 16.03.2026

Valid to:

30.12.2027

EPD software:

LCAno EPD generator ID: 1430836

EPD-Global

General information

Product:

Isotekk 5500 SEP, Svejseoverlag 5500

Program operator:

EPD-Global
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-global.com

Declaration number:

NEPD-4148-3365-EN

This declaration is based on Product Category Rules:

EN 15804:2012+A2:2019 serves as core PCR
NPCR 022:2022 Part B for Roof waterproofing

Statement of liability:

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

Declared unit:

1 m² Isotekk 5500 SEP, Svejseoverlag 5500

Declared unit (cradle to gate) with option:

A1-A3, A4, A5, C1, C2, C3, C4, D

Functional unit:

1 m² of the installed product on the roof

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:

Independent third party 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:

Elisabet Amat, GREENIZE projects

(no signature required)

Owner of the declaration:

Isola AS
Contact person: Raquel Flavio
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e-mail: r.flavio@isola.no

Manufacturer:

Isola AS
Prestemoen 9
3946 Porsgrunn, Norway

Place of production:

Isola AS Fabrikk Eidanger
Prestemoen 9
3946 Porsgrunn, Norway

Management system:

ISO 9001 Certificate No: QSC-6011, ISO 14001:2015

Organisation no:

928 764 745

Issue date:

30.12.2022

Valid to:

30.12.2027

Year of study:

2025

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

Development and verification of EPD:

The declaration is created using EPD generator v2025.09, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD-Global. NEPD19

Developer of EPD: Raquel Flavio

Reviewer of company-specific input data and EPD: Morten Schelver

Approved:



Håkon Hauan, CEO EPD-Global

Product:

Product description:

This is a product specific EPD for Isola Isotekk 5500 SEP, Svejseoverlag 5500. This is a one-layer roofing sheet for slope- and flat roofs, new built and rehabilitation.

Product specification

The product is made of natural bitumen free of tar, combined with thermoplastic elastomer, natural filler and sprinkle for UV protection and micrometer-thin foil. Raw materials are mixed separately at a specific range of temperature and successively reinforced with polyester fleece or glass mat by impregnation. After calendaring and cooling, the roofing sheet is finished with light weight plastic films or slate granules. Products have tacky edges to ensure a continuous water protecting layer, these edges are protected with PP films.

Materials	kg	%
Additives	0.309	4.89
Bitumen	3.24	51.16
Plastic - Polypropylene (PP)	0.009	0.1423
Raw materials, Mineral	2.53	40.03
Tape	0.009	0.1423
Textile - Polyester	0.23	3.64
Total	6.32	100.00

Packaging	kg	%
Packaging - Plastic	0.009	5.29
Packaging - Wood	0.161	94.71
Total incl. packaging	6.49	100.00

Technical data:

Weight: 5,5 kg/m²

Thickness: 4,2 mm

Market:

Sweden, Denmark

Reference service life, product

30 years

Reference service life, building

50 years

LCA: Calculation rules

Declared unit:

1 m² Isotekk 5500 SEP, Svejseoverlag 5500

Cut-off criteria:

All major raw materials and all the essential energy are included. The production processes for raw materials and energy flows with very small amounts (less than 1%) may not be included. These cut-off criteria do not apply for hazardous materials and substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

Data quality:

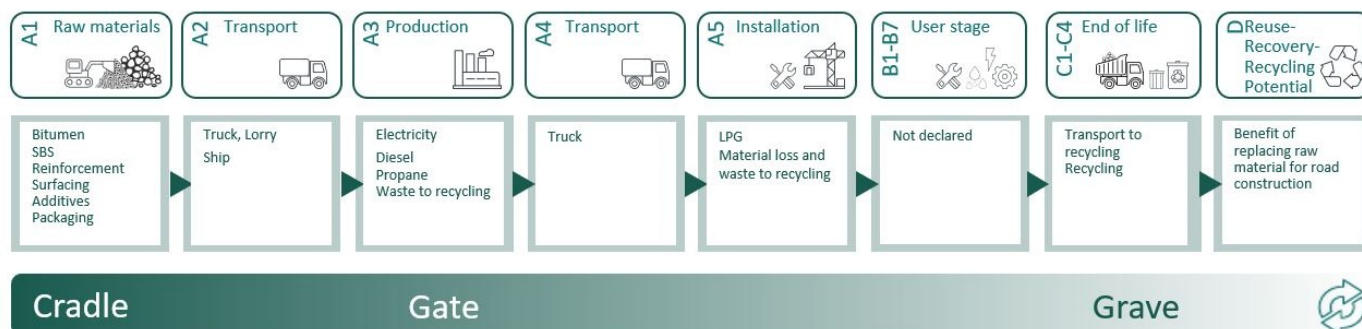
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Additives	ecoinvent 3.10.1	Database	2023
Bitumen	Eurobitume (2019)	LCI	2019
Packaging - Plastic	ecoinvent 3.10.1	Database	2023
Packaging - Wood	ecoinvent 3.10.1	Database	2023
Plastic - Polypropylene (PP)	ecoinvent 3.10.1	Database	2023
Raw materials, Mineral	ecoinvent 3.10.1	Database	2023
Tape	ecoinvent 3.10.1	Database	2023
Textile - Polyester	S-P-04186	EPD	2020

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

Product stage			Construction installation stage		Use stage								End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	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	X	X	MND	MND	MND	MND	MND	MND	MND		X	X	X	X	X

System boundary:



Additional technical information:

LCA: Scenarios and additional technical information

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

The product is installed in A5 using LPG and assuming 2 % material loss. The packaging is waste treated. Module C1 is included but assumed to be zero, since the product is only a minor part of a total building demolition. The product is assumed to be incinerated with energy recovery in C3. The benefit of substituting energy (heat and electricity) is included in module D.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, EURO 6 (kgkm)	36.7 %	1242.00	0.043	l/tkm	53.41
Assembly (A5)	Unit	Value			
Waste, plastic, mixture, to average treatment (kg)	kg	0.009			
Waste treatment, packaging, pallet, EUR wooden pallet, single use (kg)	kg	0.161			
Material loss (kg)	Units/DU	0.02			
Propane, burned (kg)	kg/DU	0.17			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Lastebil, EURO 6 (kgkm)	36.7 %	85.00	0.043	l/tkm	3.66
Waste processing (C3)	Unit	Value			
Waste treatment per kg Plastic, Mixture, municipal incineration with fly ash extraction (kg)	kg	0.0045			
Waste treatment per kg Rubber, municipal incineration with fly ash extraction (kg)	kg	0.1545			
Waste treatment per kg Polypropylene, PP, incineration with fly ash extraction - C3 (kg)	kg	0.0045			
Waste treatment per kg Bitumen sheet, incineration with fly ash extraction (kg)	kg	6.32			
Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg)	kg	0.004657			
Landfilling of ashes from incineration of Rubber, process per kg ashes and residues - C4 (kg)	kg	0.1626			
Landfilling of ashes from incineration of Polypropylene, PP, process per kg ashes and residues - C4 (kg)	kg	0.004634			
Landfilling of ashes from incineration of bitumen sheet, process per kg ashes and residues (kg)	kg	2.34			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	0.000001744			
Substitution of electricity, in Norway (MJ)	MJ	9.53			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	137.64			

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	GWP-total	kg CO ₂ -eq	3.09E+00	5.50E-01	1.32E+00	0	7.64E-02	1.54E+01	6.91E-02	-8.31E-01
	GWP-fossil	kg CO ₂ -eq	3.05E+00	5.49E-01	1.08E+00	0	7.64E-02	1.54E+01	6.90E-02	-8.02E-01
	GWP-biogenic	kg CO ₂ -eq	-2.45E-01	2.27E-04	2.39E-01	0	3.16E-05	3.13E-04	4.03E-05	-1.45E-03
	GWP-luluc	kg CO ₂ -eq	2.88E-01	1.96E-04	5.28E-03	0	2.72E-05	1.27E-04	1.31E-05	-2.75E-02
	ODP	kg CFC11 -eq	2.32E-07	1.24E-07	-1.16E-03	0	1.73E-08	6.73E-09	1.08E-08	-5.81E-02
	AP	mol H+ -eq	2.30E-02	1.58E-03	2.56E-03	0	2.19E-04	4.93E-03	3.02E-04	-6.99E-03
	EP-FreshWater	kg P -eq	3.34E-04	4.39E-06	8.59E-06	0	6.10E-07	6.66E-05	8.74E-07	-1.34E-04
	EP-Marine	kg N -eq	6.88E-03	3.12E-04	6.65E-04	0	4.34E-05	1.46E-03	9.95E-05	-2.17E-03
	EP-Terrestrial	mol N -eq	5.89E-02	3.49E-03	6.91E-03	0	4.86E-04	1.34E-02	1.12E-03	-2.35E-02
	POCP	kg NMVOC -eq	1.77E-02	1.34E-03	2.34E-03	0	1.86E-04	3.57E-03	3.14E-04	-6.51E-03
	ADP-minerals&metals ¹	kg Sb-eq	1.82E-05	1.52E-05	1.77E-06	0	2.11E-06	2.19E-06	5.81E-07	-1.36E-05
	ADP-fossil ¹	MJ	2.04E+02	8.30E+00	1.32E+01	0	1.15E+00	2.87E+00	8.57E-01	-1.14E+01
	WDP ¹	m ³	9.16E+00	8.03E+00	2.54E+00	0	1.12E+00	4.80E-01	5.69E+00	-3.61E+00

GWP-total = Global Warming Potential total; GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

1. 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

Remarks to environmental impacts

The LCA results in the EPD are calculated using a specific methodological approach for accounting energy resources, see the additional requirements section for more information. In this EPD the following approach was used: Location-based approach.

Additional environmental impact indicators									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
 PM	Disease incidence	3.75E-07	3.36E-08	2.46E-08	0	4.68E-09	3.01E-08	4.44E-09	-4.00E-07
 IRP ²	kgBq U235 -eq	8.53E-02	3.63E-02	3.88E-02	0	5.05E-03	1.83E-02	3.79E-03	-8.23E-02
 ETP-fw ¹	CTUe	4.62E+01	6.16E+00	5.33E+00	0	8.56E-01	3.20E+00	1.10E+00	-5.97E+01
 HTP-c ¹	CTUh	5.97E-09	0.00E+00	3.36E-10	0	0.00E+00	5.95E-10	5.00E-11	-1.12E-09
 HTP-nc ¹	CTUh	4.93E-08	6.73E-09	7.20E-09	0	9.35E-10	8.41E-09	1.83E-09	-6.35E-08
 SQP ¹	dimensionless	5.50E+01	5.81E+00	1.02E+00	0	8.08E-01	1.48E+00	2.13E+00	-7.63E+01

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

1. 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
2. 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.

Resource use										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	PERE	MJ	5.23E+00	1.19E-01	-1.25E+00	0	1.65E-02	2.24E-01	3.48E-02	-7.09E+01
	PERM	MJ	2.37E+00	0.00E+00	-2.19E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	7.61E+00	1.19E-01	-3.44E+00	0	1.65E-02	2.24E-01	3.48E-02	-7.09E+01
	PENRE	MJ	5.94E+01	8.31E+00	1.03E+01	0	1.15E+00	2.87E+00	8.57E-01	-1.14E+01
	PENRM	MJ	1.46E+02	0.00E+00	2.05E+00	0	0.00E+00	-8.80E+00	0.00E+00	0.00E+00
	PENRT	MJ	2.05E+02	8.31E+00	1.24E+01	0	1.15E+00	-5.93E+00	8.57E-01	-1.14E+01
	SM	kg	1.87E-01	0.00E+00	3.73E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	RSF	MJ	8.47E-02	4.25E-03	3.11E-03	0	5.91E-04	3.32E-05	8.78E-04	-4.08E-03
	NRSF	MJ	1.56E-02	1.52E-02	-6.20E-02	0	2.11E-03	0.00E+00	3.39E-02	-4.16E+00
	FW	m ³	5.25E-02	8.88E-04	2.20E-04	0	1.23E-04	8.28E-03	7.81E-04	-8.39E-02

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 materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

End of life - Waste										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 HWD	kg	5.00E-02	4.28E-04	4.88E-02	0	5.95E-05	0.00E+00	2.36E+00	-7.98E-03	
 NHWD	kg	2.24E+00	4.04E-01	3.71E-01	0	5.62E-02	6.49E+00	4.45E-01	-5.46E-01	
 RWD	kg	1.79E-03	5.66E-05	9.63E-05	0	7.87E-06	0.00E+00	5.22E-06	-5.77E-05	

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

End of life - Output flow										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 CRU	kg	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 MFR	kg	7.53E-02	0.00E+00	4.32E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 MER	kg	1.36E-07	0.00E+00	1.60E-01	0	0.00E+00	9.00E-03	0.00E+00	0.00E+00	
 EEE	MJ	3.82E-04	0.00E+00	1.11E-01	0	0.00E+00	5.67E-03	0.00E+00	0.00E+00	
 EET	MJ	8.53E-03	0.00E+00	1.68E+00	0	0.00E+00	2.78E-03	0.00E+00	0.00E+00	

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

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0.00E+00
Biogenic carbon content in accompanying packaging	kg C	7.38E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Additional requirements

Transparent reporting of energy

The EPD presents environmental impact categories in the main results tables using a specific methodological approach for accounting energy resources. To ensure transparency and support informed interpretation, the table below explains the implications of the chosen methodology. It illustrates the GWP-total for energy resources used in the manufacturing stage, comparing the location-based and market-based approaches. In this EPD the following approach was used in main result tables: Location-based approach.

Electricity mix	Source	Amount	Unit	GWPtotal [kg CO ₂ /Unit]	SUM [kg CO ₂]
Location-based approach.					
Electricity, Norway, low voltage	ecoinvent 3.10.1	4.81E-01	kWh	2.46E-02	1.18E-02
Market-based approach.					
Electricity, Norway, low voltage, residual mix	ecoinvent 3.10.1	4.80E-01	kWh	6.23E-01	2.99E-01

Dangerous substances

The product contains no substances given by the REACH Candidate list.

Indoor environment

Not relevant, the product is intended for outdoor use.

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
GWPIOBC	kg CO ₂ -eq	3.33E+00	5.50E-01	1.08E+00	0	7.64E-02	1.54E+01	6.98E-02	-8.19E-01

GWP-IOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

Bibliography

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