

# ENVIRONMENTAL PRODUCT DECLARATION

in accordance with ISO 14025, ISO 21930 and EN 15804

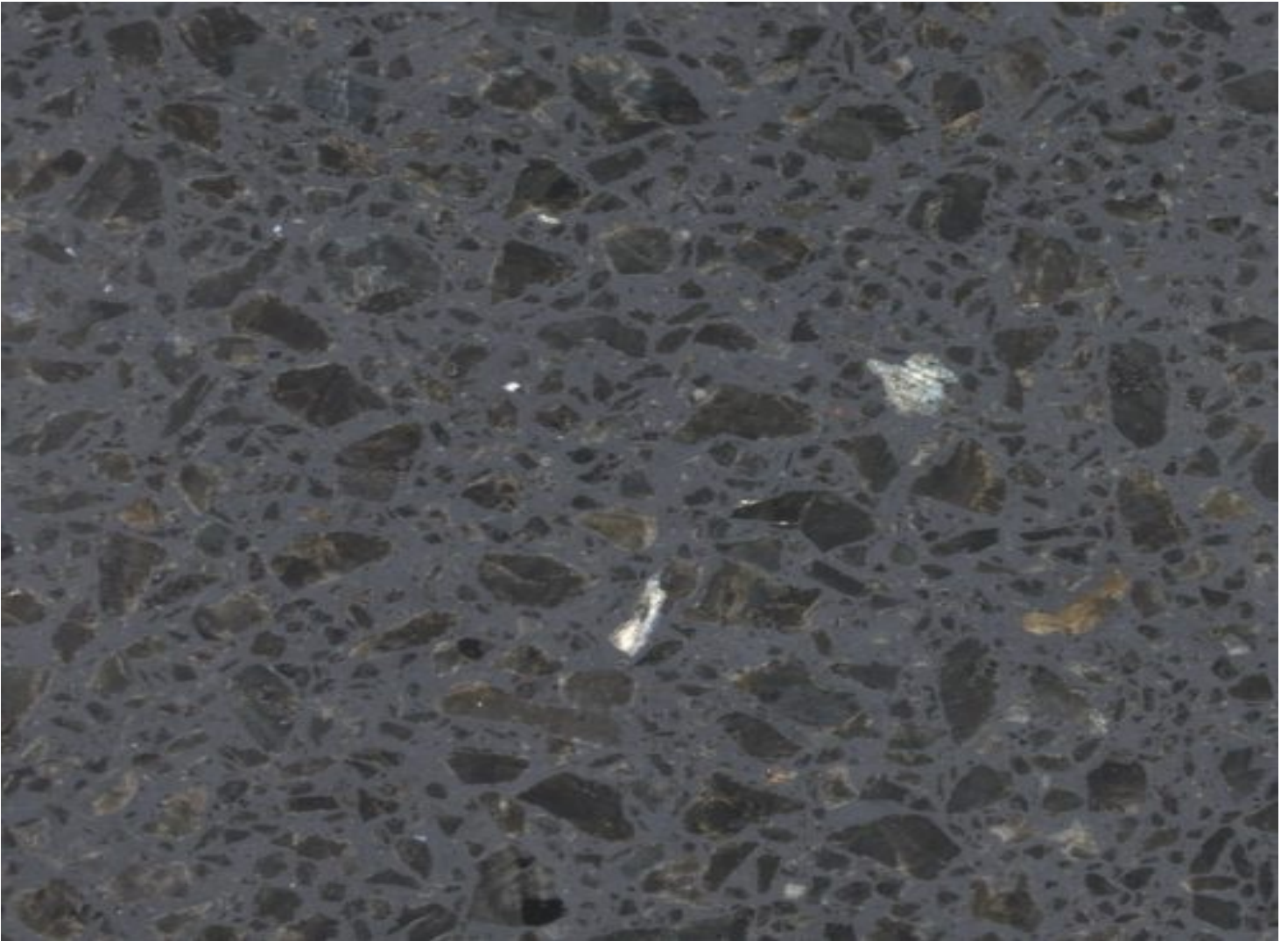
Owner of the declaration:	Ellingard Gruppen
Program operator:	The Norwegian EPD Foundation
Publisher:	The Norwegian EPD Foundation
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Valid to:	28.09.2026

## Herrljunga Terrazzo, HT - Lykke

Ellingard Gruppen

[www.epd-norge.no](http://www.epd-norge.no)





## General information

<b>Product:</b>	<b>Owner of the declaration:</b>
Herrljunga Terrazzo, HT - Lykke	Ellingard Gruppen Contact person: Tom-Roald Wollertsen Phone: 22 15 55 50 e-mail: tom.roald@respo.no
<b>Program operator:</b>	<b>Manufacturer:</b>
The Norwegian EPD Foundation Pb. 5250 Majorstuen, 0303 Oslo Phone: +47 23 08 80 00 e-mail: <a href="mailto:post@epd-norge.no">post@epd-norge.no</a>	Herrljunga Terrazzo AB
<b>Declaration number:</b>	<b>Place of production:</b>
NEPD-3153-1797	Herrljunga Terrazzo AB Box 13 524 21 Herrljunga Sweden
<b>ECO Platform reference number:</b>	<b>Management system:</b>
<b>This declaration is based on Product Category Rules:</b>	<b>Organisation no:</b>
CEN Standard EN 15804:2012+A1:2013 serves as core PCR NPCR 009:2018 Part B for Technical - Chemical products in the building and construction industry	895 745 812
<b>Statement of liability:</b>	<b>Issue date:</b> 28.09.2021
The owner of the declaration shall be liable for the underlying information and evidence. EPD Norway shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.	<b>Valid to:</b> 28.09.2026
<b>Declared unit:</b>	<b>Year of study:</b>
1 m2 Herrljunga Terrazzo, HT - Lykke	2020
<b>Declared unit with option:</b>	<b>Comparability:</b>
A1,A2,A3,A4,A5,B2,C1,C2,C3,C4,D	EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.
<b>Functional unit:</b>	<b>Development and verification of EPD:</b>
	The declaration has been developed and verified using EPD tool lca.tools ver EPD2020.11, developed by LCA.no AS. The EPD tool is integrated into the company's environmental management system, and has been approved by EPD-Norway
<b>General information on verification of EPD from EPD tools:</b>	Developer of EPD: Anders Lundell Reviewer of company-specific input data and EPD: Tom-Roald Wollertsen
Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Individual third party verification of each EPD is not required when the EPD tool is i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPDNorway, and iii) the process is reviewed annually. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools.	<b>Approved:</b>
<b>Verification of EPD tool:</b>	Sign  Håkon Hauan, CEO EPD-Norge
Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPDNorway's procedures and guidelines for verification and approval of EPD tools.	
Martin Erlandsson, IVL, Swedish Environmental Research Institute (no signature required)	

## Product

### Product description:

Terrazzo cast on site, cement bounded.  
Used as pavement on floors, surfaces in stairs, counter tops and other three dimensional constructions.

### Product specification

Materials	kg	%
Cement	10,79	25,75
Aggregate	30,58	72,95
Chemicals	0,13	0,30
Pigments	0,42	1,00
Total:	41,92	

Packaging	kg	
Packaging	0,04	
Packaging	0,05	
Packaging	0,18	
Total including packaging	42,2	

### Technical data:

Reference to Sintef Building reseach design guides no. 541.210

### Market:

Norway

### Reference service life, product

As in building

### Reference service life, building

200 year

## LCA: Calculation rules

### Declared unit:

1 m2 Herrljunga Terrazzo, HT - Lykke

### Cut-off criteria:

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

### Data quality:

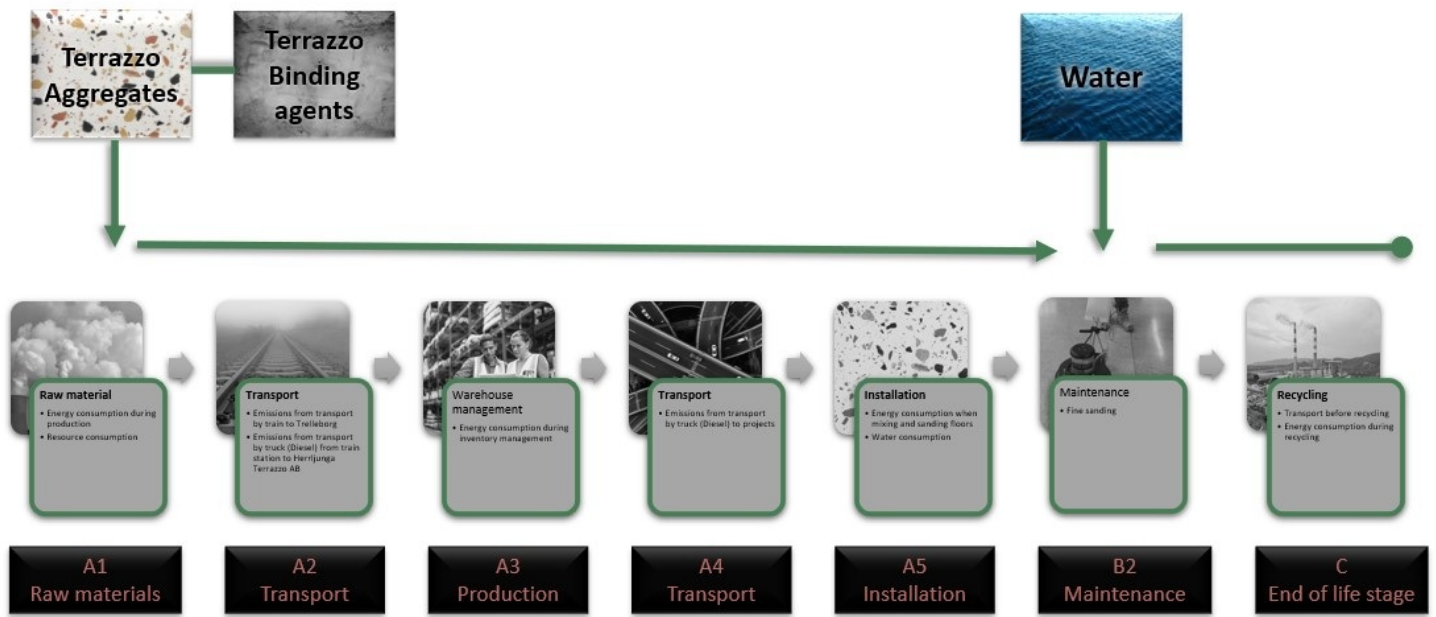
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other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

### 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.

Materials	Source	Data quality	Year
Cement	EPD-HCG-20140206-GAA 1-EN	Modified EPD for use in Norway	2014
Chemicals	EPD-EFC-20150088-IAG1-EN	EPD	2015
Chemicals	EPD-EFC-20150091-IAG1-EN	EPD	2015
Packaging	ecoinvent 3.4	Database	2017
Packaging	Modified ecoinvent 3.4	Database	2017
Cement	S-P-01276	EPD	2018
Pigments	ecoinvent 3.6	Database	2019
Aggregate	NEPD-2300-1045-NO	EPD	2020

**System boundary:**



**Additional technical information:**

## LCA: Scenarios and additional technical information

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

### Transport from production place to user (A4)

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	38,8 %	Lastebil, 16-32 tonn, EURO 6 (kgkm)	350	0,043626	l/tkm	15,27
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

### Assembly (A5)

	Unit	Value
Auxiliary	kg	
Water consumption	m <sup>3</sup>	
Electricity consumption	kWh	1,4252
Other energy carriers	MJ	
Material loss	kg	
Output materials from waste treatment	kg	0,2772
Dust in the air	kg	
VOC emissions	kg	

### End of Life (C1, C3, C4)

	Unit	Value
Hazardous waste disposed	kg	
Collected as mixed construction waste	kg	
Reuse	kg	
Recycling	kg	32,0000
Energy recovery	kg	
To landfill	kg	16,0000

### Maintenance (B2)/Repair (B3)

	Unit	Value
Maintenance cycle*	.	
Auxiliary	kg	
Other resources	kg	
Water consumption	m <sup>3</sup>	
Electricity consumption	kWh	1,8000
Other energy carriers	MJ	
Material loss	kg	
VOC emissions	kg	

### Transport to waste processing (C2)

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	38,8 %	Lastebil, 16-32 tonn, EURO 6 (kgkm)	50	0,043626	l/tkm	2,18
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

..

### Benefits and loads beyond the system boundaries (D)

	Unit	Value
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	5,59
Substitution of electricity, in Norway (MJ)	MJ	0,81

## LCA: Results

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

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

Product stage			Construction installation stage		User 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	X	MND	MND	MND	MND	MND	X	X	X	X	X

### Environmental impact

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
GWP	kg CO <sub>2</sub> -eq	9,27E+00	5,98E-01	6,11E-01	5,59E-02	3,96E-03	3,42E-01	2,78E-02	6,83E-02	-5,39E-02
ODP	kg CFC11 -eq	2,94E-07	1,10E-07	6,80E-09	5,28E-09	6,86E-10	6,30E-08	5,54E-09	2,65E-08	-1,17E-08
POCP	kg C <sub>2</sub> H <sub>4</sub> -eq	1,29E-03	7,26E-05	1,21E-05	1,25E-05	6,63E-07	4,15E-05	5,11E-06	1,72E-05	-4,96E-05
AP	kg SO <sub>2</sub> -eq	1,34E-02	1,19E-03	2,93E-04	2,61E-04	2,99E-05	6,78E-04	1,41E-04	4,96E-04	-2,63E-04
EP	kg PO <sub>4</sub> <sup>3-</sup> -eq	2,24E-03	1,26E-04	7,59E-05	6,28E-05	6,53E-06	7,21E-05	2,50E-05	9,66E-05	-6,81E-05
ADPM	kg Sb -eq	4,02E-05	1,66E-05	7,47E-07	9,15E-07	1,70E-11	9,48E-06	1,70E-09	1,06E-09	-4,48E-07
ADPE	MJ	5,86E+01	9,08E+00	5,93E-01	5,67E-01	5,47E-02	5,19E+00	2,71E-01	2,18E+00	-6,62E-01

GWP Global warming potential; ODP Depletion potential of the stratospheric ozone layer; POCP Formation potential of tropospheric photochemical oxidants; AP Acidification potential of land and water; EP Eutrophication potential; ADPM Abiotic depletion potential for non fossil resources; ADPE Abiotic depletion potential for fossil resources

"Reading example: 9,0 E-03 = 9,0\*10<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

## Resource use

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
RPEE	MJ	8,84E+00	1,30E-01	7,19E+00	7,36E+00	3,00E-04	7,44E-02	3,63E-01	3,41E-02	-2,79E+00
RPEM	MJ	1,62E+00	0,00E+00	-1,62E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
TPE	MJ	1,05E+01	1,30E-01	7,19E+00	7,36E+00	3,00E-04	7,44E-02	3,63E-01	3,41E-02	-2,79E+00
NRPE	MJ	6,72E+01	9,15E+00	8,92E+00	9,75E-01	5,52E-02	5,23E+00	7,09E-01	2,22E+00	-1,51E+00
NRPM	MJ	8,96E+00	0,00E+00	-8,96E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
TRPE	MJ	7,61E+01	9,15E+00	8,92E+00	9,75E-01	5,52E-02	5,23E+00	7,10E-01	2,22E+00	-1,51E+00
SM	kg	1,32E+00	3,72E-03	0,00E+00	0,00E+00	0,00E+00	2,12E-03	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	7,42E+00	4,65E-03	1,06E-03	1,28E-03	0,00E+00	2,66E-03	0,00E+00	0,00E+00	-1,60E-04
NRSF	MJ	9,06E+00	1,66E-02	0,00E+00	0,00E+00	0,00E+00	9,50E-03	0,00E+00	0,00E+00	0,00E+00
W	m <sup>3</sup>	1,74E-02	9,71E-04	5,95E-04	4,07E-04	4,75E-06	5,55E-04	1,78E-04	2,56E-03	-4,49E-04

RPEE Renewable primary energy resources used as energy carrier; RPEM Renewable primary energy resources used as raw materials; TPE Total use of renewable primary energy resources; NRPE Non renewable primary energy resources used as energy carrier; NRPM Non renewable primary energy resources used as materials; TRPE 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; W Use of net fresh water

"Reading example: 9,0 E-03 = 9,0\*10<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

## End of life - Waste

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
HW	kg	1,07E-03	4,68E-04	1,69E-06	1,25E-06	1,50E-07	2,67E-04	6,55E-07	2,46E-06	-1,40E-06
NHW	kg	1,60E+00	4,41E-01	7,45E-02	7,38E-02	2,50E-04	2,52E-01	8,00E-03	1,60E+01	-3,07E-02
RW	kg	INA*	INA*	INA*	INA*	INA*	INA*	INA*	INA*	INA*

HW Hazardous waste disposed; NHW Non hazardous waste disposed; RW Radioactive waste disposed

"Reading example: 9,0 E-03 = 9,0\*10<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

## End of life - Output flow

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
CR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MR	kg	3,98E-04	5,15E-05	0,00E+00	0,00E+00	0,00E+00	2,95E-05	3,20E+01	0,00E+00	0,00E+00
MER	kg	5,64E-03	3,08E-03	2,77E-01	0,00E+00	0,00E+00	1,76E-03	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	INA*	INA*	INA*	INA*	INA*	INA*	INA*	INA*	INA*
ETE	MJ	INA*	INA*	INA*	INA*	INA*	INA*	INA*	INA*	INA*

CR Components for reuse; MR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy

"Reading example: 9,0 E-03 = 9,0\*10<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

## Additional Norwegian requirements

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

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Data source	Amount	Unit
El-mix, Sweden (kWh)	ecoinvent 3.4 Alloc Rec	42,67	g CO <sub>2</sub> -ekv/kWh

### Dangerous substances





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

### Indoor environment

No impacts on indoor climate

## Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.  
 ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.  
 EN 15804:2012+A1:2013 Environmental product declaration - Core rules for the product category of construction products.  
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 NPCR 018 Part B for natural stone products, aggregates and fillers Ver. 1.0 May 2020, EPD-Norge.

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