



**WELAND**



## HOT-DIP GALVANISED STEEL PRODUCTS

FLOOR GRATING, RAMPS, RAILINGS & STAIRCASES

ENVIRONMENTAL PRODUCT DECLARATION - EPD  
IN ACCORDANCE WITH ISO 14025 AND EN 15804:2012+A2:2019

Registration number: SP-03672

EPD programme: International EPD system®, [www.environdec.com](http://www.environdec.com)

Programme operator EPD International AB

Publication date 22/10/2021

Revision date 2023-12-12 (Result indicator GWP-GHG)

Valid until 22/10/2026.







Weland AB, Malmgatan 34, SE-333 30 Smålandsstenar, Sweden. Tel.: +46 (0)371 344 00

## VERIFICATION INFORMATION

### Programme operator

The International EPD® System  
EPD International AB  
Box 210 60  
SE-100 31 Stockholm  
Sweden  
environdec.com  
info@environdec.com

### Third party inspector

Pär Lindman  
Miljögiraff

### Third party inspector authorised by

The International EPD® System

Product-specific regulations (PCR): PCR 2019:14 - Construction products v1.1

PCR inspection carried out by: Technical Committee for the International EPD® System.

Chair: Claudia A. Peña

Contact via: info@environdec.com

Independent EPD verification of declaration and data in accordance with ISO 14025:2006, EN 15804:2012+A2:2019.

Approved by: The International EPD® System

The procedure for following up information during the period of validity of the EPD involves a third party inspector.

EPD Registration Number

SP 03672

Publication date

22/10/2021

Valid until

22/10/2026

The declaration owner bears responsibility for the content of the EPD. Environmental product declarations within the same product from different programme operators are not always comparable.



## COMPANY INFORMATION

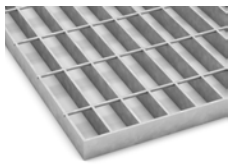
Weland AB is a family owned company with a factory and head office in Smålandsstenar, Sweden. A leading manufacturer and supplier of spiral staircases, straight flight staircases, railings, ramps, and floor grating in steel. Weland is also one of Sweden's leading contributors in the sheet metal working sector. Weland is the parent company of 32 manufacturing entities in Sweden and 4 subsidiaries based overseas. What is significant for all companies in the Weland group is that they produce and sell Swedish-made products.

The company has production and surface treatment facilities in Smålandsstenar and Ulricehamn.

## PRODUCT & PRODUCTION DESCRIPTION

Production of hot-dip galvanised steel products. Weland's hot-dip galvanised steel products come in 4 main categories. Floor grating, staircases, railings, and mezzanines. In addition to these, there are also a number of sub-categories such as spiral staircases, straight flight staircases, and wheelchair ramps. The majority of production takes place in Smålandsstenar, although straight flight staircases are fabricated and hot-dip galvanised at the facilities in Ulricehamn. Floor gratings are made from industrial grade steel grating and usually used for pedestrian traffic, but also by vehicles. No matter whether you need indoor or outdoor staircases, Weland has a wide range of products for use in diverse environments ranging from industrial premises and public buildings, to offices and residential properties. Railings from Weland are sectional and come in a range of different designs, affording great flexibility and making them easy to adapt to different types of environment. Weland's complete ramps are made from grating, and include railings, stringers, and requisite supporting legs. Production involves sheet metal working, welding, surface treatment, and packing.

UN CPC code: 412



GRATINGS



RAMPS



RAILINGS



STAIRCASES

## DECLARATION OF CONTENTS

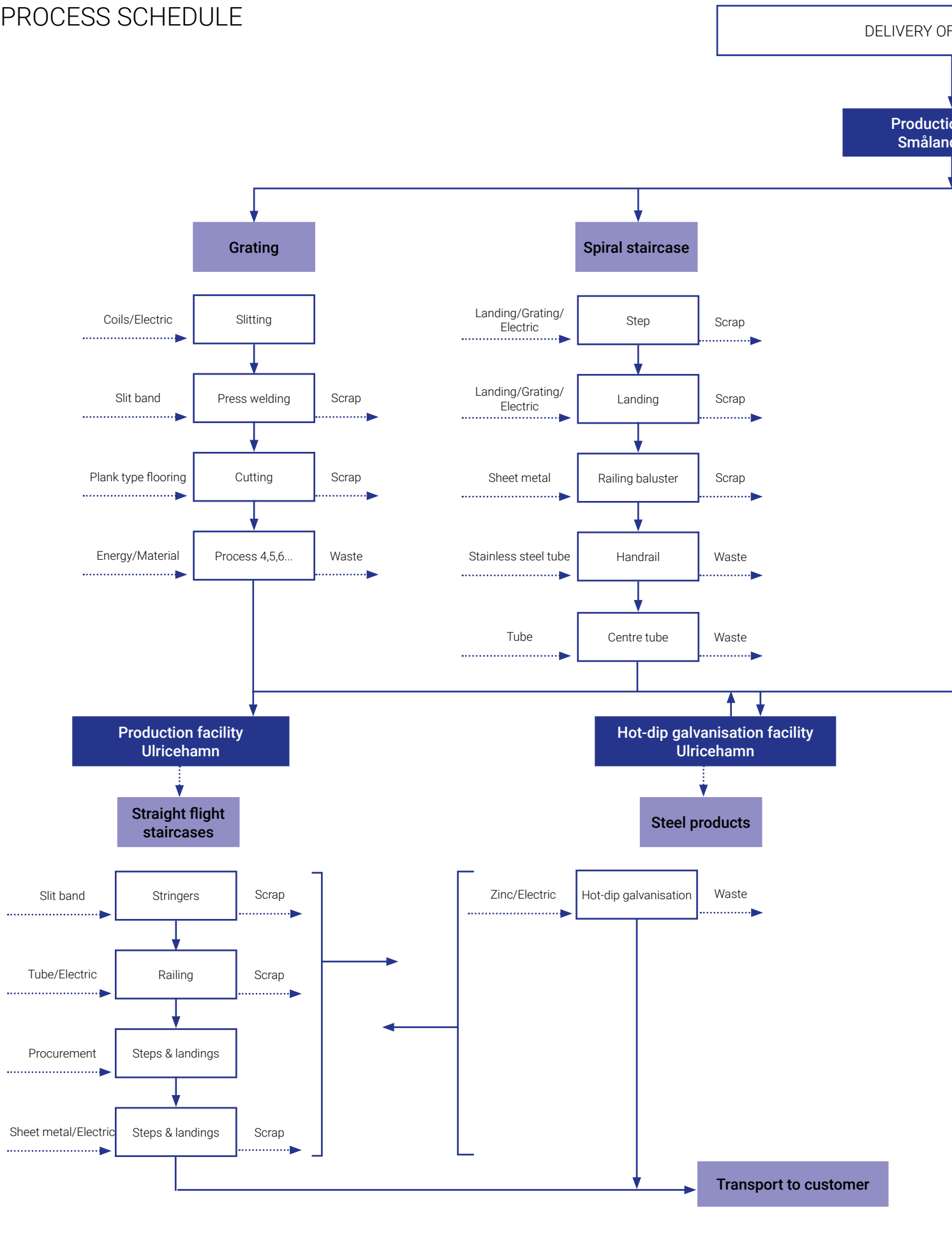
Components	Grating	Ramps	Railings	Staircases
	% of total weight	% of total weight	% of total weight	% of total weight
Steel tube, cold rolled steel (PRT C)	0%	20%	21%	0%
Steel tube, hot rolled steel (PRT HP)	0%	10%	10%	3%
Round bar infill, top rail	0%	0%	61%	0%
Cold rolled steel (S355MC)	94%	47%	0%	73%
Steel tube, galvanised steel (PRT Z)	0%	0%	0%	16%
Stringer	0%	15%	0%	0%
Zinc	6%	8%	8%	8%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## LCA INFORMATION

The Environmental Product Declaration concerns cradles for use with gates with modules C1-C4 and D. Modules A4, A5, and B1-B7 are not included.

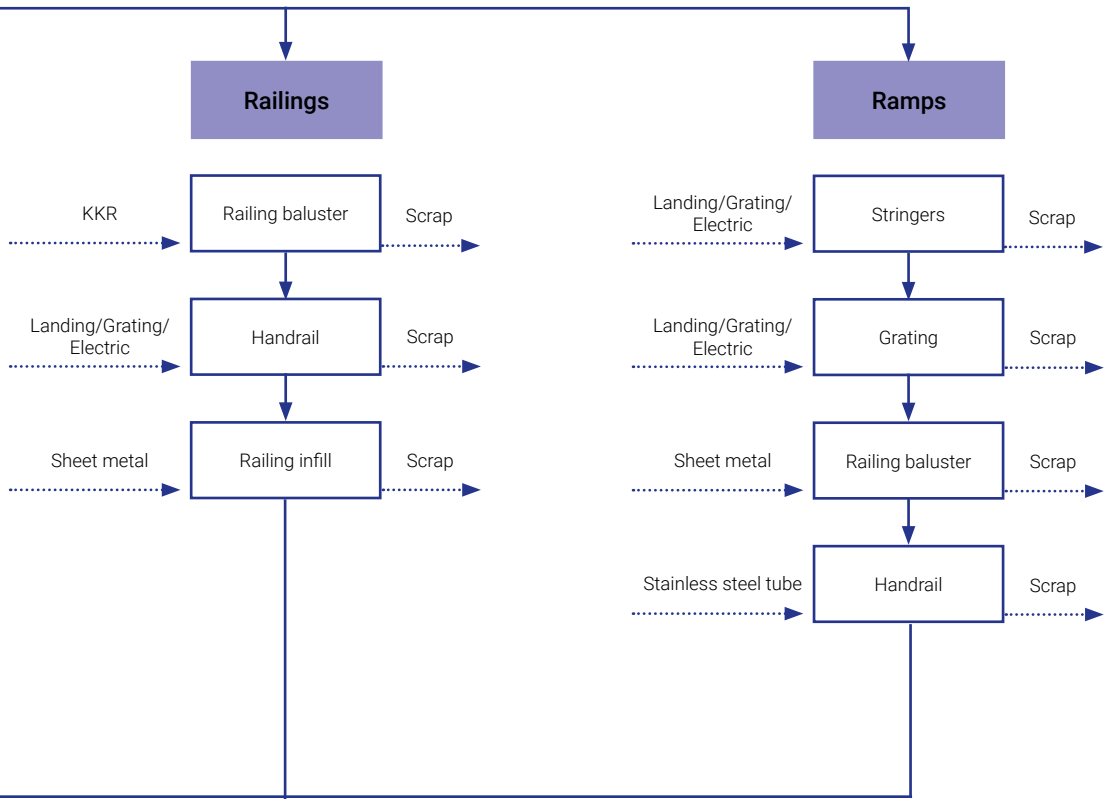
Declared unit:	1 tonne hot-dip galvanised steel products
End phase:	After use, the materials are to be sorted and transported to recycling or landfill. It is expected that 90% of product weight will be recycled, with the remaining 10% going to landfill. The transport to waste management scenario is based on generic data for handling scrap iron in Europe.
Ref. year for information:	2020
Database used:	Ecoinvent 3.7.1
LCA software:	SimaPro 9.2

# PROCESS SCHEDULE



F MATERIALS

on facility  
dsstenar



## USE OF RESOURCES

Use of resources for 1 tonne hot-dip galvanised steel products.

Life cycle phases & modules (MND = module not declared)																
Product			Construction phase		Use							End phase			Outside system limits	
Raw material supply	Transport	Manufacturing	Transport	Installation	Use	Maintenance	Repair	Replacement	Renovation	Operative energy use	Operative water use	Dismantling	Transport	Waste Management	Landfill	Reuse & recycling
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

## GRATINGS

RESOURCE USE PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FPEE	[MJ]	9.41E+02	0.00E+00	7.99E-01	5.28E+01	7.97E-02	-5.27E+02
*FPPEM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*TFE	[MJ]	9.41E+02	0.00E+00	7.99E-01	5.28E+01	7.97E+02	-5.27E+02
*IFPE	[MJ]	2.77E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*IFPM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*TIFE	[MJ]	2.77E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*SM	[kg]	2.30E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*FSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*IFSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*V	[MJ]	2.86E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## RAMPS

RESOURCE USE PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FPEE	[MJ]	9.72E+02	0.00E+00	7.99E-01	5.28E+01	7.97E-02	-5.27E+02
*FPPEM	[MJ]	0.00E+00	0.00E+00	4.90E+01	0.00E+00	0.00E+00	0.00E+00
*TFE	[MJ]	9.72E+02	0.00E+00	7.99E-01	5.28E+01	7.97E-02	-5.27E+02
*IFPE	[MJ]	2.76E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*IFPM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*TIFE	[MJ]	2.76E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*SM	[kg]	2.30E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*FSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*IFSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*V	[MJ]	2.86E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## RAILINGS

RESOURCE USE PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FPEE	[MJ]	1.57E+03	0.00E+00	7.99E-01	5.28E+01	7.97E-02	-5.27E+02
*FPEM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*TFE	[MJ]	1.57E+03	0.00E+00	7.99E-01	5.28E+01	7.97E-02	-5.27E+02
*IFPE	[MJ]	1.82E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*IFPM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*TIFE	[MJ]	1.82E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*SM	[kg]	2.30E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*FSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*IFSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*V	[MJ]	2.86E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## STAIRCASES

RESOURCE USE PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FPEE	[MJ]	1.24E+03	0.00E+00	7.99E-01	5.28E+01	7.97E-02	-5.27E+02
*FPEM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*TFE	[MJ]	1.24E+03	0.00E+00	7.99E-01	5.28E+01	7.97E+02	-5.27E+02
*IFPE	[MJ]	2.76E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*IFPM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*TIFE	[MJ]	2.76E+03	0.00E+00	4.90E+01	3.02E+02	9.76E+00	-1.52E+04
*SM	[kg]	2.30E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*FSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*IFSB	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*V	[MJ]	2.86E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

\*FPEE - Användning av förnybar primärenergi exklusive primära energiresurser som används som råmaterial. / Use of renewable primary energy excluding renewable primary energy resources used as raw materials \*FPEM - Användning av förnybara primärenergiresurser som används som råmaterial. / Use of renewable primary energy resources used as raw materials \*TFE - Total användning av förnybar energi. / Total use of renewable primary energy resources \*IFPE - Användning av ej förnybar primärenergi exklusive primära energiresurser som används som råmaterial. / Use of non renewable primary energy resources used as raw materials \*IFPM - Användning av ej förnybara primärenergiresurser som används som råmaterial. / Use of non renewable primary energy resources used as raw materials \*TIFE - Total användning av ej förnybar primärenergi. / Total use of non renewable primary energy resources \*SM - Användning av återvunna eller återanvända material. / Use of secondary material \*FSB - Användning av förnybara sekundära bränslen. / Use of renewable secondary fuels \*IFSB - Användning av ej förnybara sekundära bränslen. / Use of non renewable secondary fuels \*V - Användning av färskvatten. / Net use of fresh water

# WASTE PRODUCTION

Waste flows for 1 tonne hot-dip galvanised steel products.

## GRATINGS

WASTE & END FLOWS PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FA	[kg]	9.70E-03	0.00E+00	0.00E+00	0.00E+00	1.66E+01	0.00E+00
*IFA	[kg]	4.83E+01	0.00E+00	0.00E+00	0.00E+00	3.3E+01	0.00E+00
*RA	[kg]	2.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*KÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*MÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+02	0.00E+00
*MEG	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*EE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## RAMPS

WASTE & END FLOWS PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FA	[kg]	9.69E-03	0.00E+00	0.00E+00	0.00E+00	1.66E+01	0.00E+00
*IFA	[kg]	4.82E+01	0.00E+00	0.00E+00	0.00E+00	3.3E+01	0.00E+00
*RA	[kg]	2.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*KÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*MÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*MEG	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+00	0.00E+00
*EE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## RAILINGS

WASTE & END FLOWS PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FA	[kg]	9.35E-03	0.00E+00	0.00E+00	0.00E+00	1.66E+01	0.00E+00
*IFA	[kg]	4.77E+01	0.00E+00	0.00E+00	0.00E+00	3.3E+01	0.00E+00
*RA	[kg]	1.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*KÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*MÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+02	0.00E+00
*MEG	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*EE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



## STAIRCASES

WASTE & END FLOWS PER [tonne]							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
*FA	[kg]	9.69e-03	0.00E+00	0.00E+00	0.00E+00	1.66E+01	0.00E+00
*IFA	[kg]	4.82e+01	0.00E+00	0.00E+00	0.00E+00	3.3E+01	0.00E+00
*RA	[kg]	2.30e-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*KÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*MÅ	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+02	0.00E+00
*MEG	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
*EE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

\*FA - Farligt avfall / Hazardous waste disposed \*FA - Icke farligt avfall / Non-hazardous waste disposed \*RA - Radiaktivt avfall / Radioactive waste disposed \*KÅ - Komponenter till återanvändning / Components for re-use \*MÅ - Material till återvinning. / Materials for recycling \*MEG - Material till energiåtervinning. / Materials for recycling \*SM - Användning av återvunna eller återanvända material. / Materials for energy recovery \*EE - Exporterad energi / Exported energy

# ENVIRONMENTAL IMPACT

Environmental impact for 1 tonne hot-dip galvanised steel products.

## GRATINGS

Indicator	Unit	A1	A2	A3	Tot. A1-A3	C1	C2	C3	C4	D
GWP - fossil	kg CO <sub>2</sub> eq.	2.46E+03	4.88E+01	1.22E+02	2.63E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03
GWP - biogenic	kg CO <sub>2</sub> eq.	2.29E+01	1.22E-01	4.54E+00	2.76E+01	0.00E+00	7.58E-03	-1.43E+00	1.38E-03	3.02E+00
GWP - luluc	kg CO <sub>2</sub> eq.	8.31E-01	2.37E-02	3.82E-02	8.93E-01	0.00E+00	1.37E-03	2.40E-02	9.18E-05	-8.50E-01
GWP - total	kg CO <sub>2</sub> eq.	2.48E+03	4.89E+01	1.26E+02	2.66E+03	0.00E+00	3.15E+00	1.93E+01	3.13E-01	-1.40E+03
ODP	kg CFC 11 eq.	1.56E-08	1.09E-05	2.29E-05	3.38E-05	0.00E+00	6.50E-07	2.59E-06	1.33E-07	-6.09E-05
AP	mol H+ eq.	4.96E+02	2.04E+00	4.08E+01	5.39E+02	0.00E+00	1.87E-01	3.98E+00	4.28E-01	-5.25E+01
EP - fresh water	kg P eq.	2.33E+04	7.29E+02	1.90E+03	2.59E+04	0.00E+00	4.62E+01	2.85E+02	9.19E+00	-1.44E+04
EP - fresh water	kg PO43- eq.	1.17E+00	3.88E-02	3.14E-01	1.53E+00	0.00E+00	3.75E-03	7.01E-02	4.68E-04	-2.46E+00
EP - salt water	kg N eq.	1.38E-03	1.70E-04	1.37E-03	2.92E-03	0.00E+00	1.11E-05	2.95E-03	7.68E-07	-8.08E-02
EP - ground	mol N eq.	2.46E+03	4.88E+01	1.22E+02	2.63E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03
POFP	kg NMVOC eq.	3.85E+00	2.17E-01	2.15E+00	6.22E+00	0.00E+00	2.02E-02	1.84E-01	2.86E-03	-6.52E+00
ADP - mineral & metals*	kg Sb eq.	1.28E-04	1.70E-04	1.37E-03	1.66E-03	0.00E+00	1.11E-05	2.95E-03	7.68E-07	-8.08E-02
ADP - fossil resources	MJ	3.36E+00	7.29E+02	1.90E+03	2.63E+03	0.00E+00	4.62E+01	2.85E+02	9.19E+00	-1.44E+04
WDP	m <sup>3</sup>	4.96E+02	2.13E+00	4.14E+01	5.40E+02	0.00E+00	1.96E-01	4.06E+00	4.29E-01	5.43E+01

## RAMPS

Indicator	Unit	A1	A2	A3	Tot. A1-A3	C1	C2	C3	C4	D
GWP - fossil	kg CO <sub>2</sub> eq.	2.08E+03	4.88E+01	1.21E+02	2.25E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03
GWP - biogenic	kg CO <sub>2</sub> eq.	2.26E+01	1.22E-01	7.36E+00	3.01E+01	0.00E+00	7.58E-03	-1.43E+00	1.38E-03	3.02E+00
GWP - luluc	kg CO <sub>2</sub> eq.	6.60E-01	2.37E-02	3.59E-02	7.20E-01	0.00E+00	1.37E-03	2.40E-02	9.18E-05	-8.50E-01
GWP - total	kg CO <sub>2</sub> eq.	2.11E+03	4.89E+01	1.29E+02	2.28E+03	0.00E+00	3.15E+00	1.93E+01	3.13E-01	-1.40E+03
ODP	kg CFC 11 eq.	9.61E-07	1.09E-05	2.29E-05	3.47E-05	0.00E+00	6.50E-07	2.59E-06	1.33E-07	-6.09E-05
AP	mol H+ eq.	1.06E+03	2.04E+00	4.06E+01	1.10E+03	0.00E+00	1.87E-01	3.98E+00	4.28E-01	-5.25E+01
EP - fresh water	kg P eq.	1.94E+04	7.29E+02	1.89E+03	2.21E+04	0.00E+00	4.62E+01	2.85E+02	9.19E+00	-1.44E+04
EP - fresh water	kg PO43- eq.	8.84E-01	3.88E-02	3.13E-01	1.24E+00	0.00E+00	3.75E-03	7.01E-02	4.68E-04	-2.46E+00
EP - salt water	kg N eq.	1.48E-03	1.70E-04	1.36E-03	3.01E-03	0.00E+00	1.11E-05	2.95E-03	7.68E-07	-8.08E-02
EP - ground	mol N eq.	2.08E+03	4.48E+01	1.21E+02	2.25E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03
POFP	kg NMVOC eq.	3.41E+00	2.17E-01	2.15E+00	5.78E+00	0.00E+00	2.02E-02	1.84E-01	2.86E-03	-6.52E+00
ADP - mineral & metals*	kg Sb eq.	1.28E-04	1.70E-04	1.36E-03	1.66E-03	0.00E+00	1.11E-05	2.95E-03	7.68E-07	-8.08E-02
ADP - fossil resources	MJ	3.36E+00	7.29E+02	1.89E+03	2.63E+03	0.00E+00	4.62E+01	2.85E+02	9.19E+00	-1.44E+04
WDP	m <sup>3</sup>	-1.06E+03	2.13E+00	4.11E+01	1.10E+03	0.00E+00	1.96E-01	4.06E+00	4.29E-01	-5.43E+01

## RAILINGS

Indicator	Unit	A1	A2	A3	Tot. A1-A3	C1	C2	C3	C4	D
GWP - fossil	kg CO <sub>2</sub> eq.	1.36E+03	4.88E+01	8.54E+01	1.49E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03
GWP - biogenic	kg CO <sub>2</sub> eq.	2.47E+01	1.22E-01	7.23E+00	3.21E+01	0.00E+00	7.58E-03	-1.43E+00	1.38E-03	3.02E+00
GWP - luluc	kg CO <sub>2</sub> eq.	2.94E-01	2.37E-02	3.41E-02	3.52E-01	0.00E+00	1.37E-03	2.40E-02	9.18E-05	-8.50E-01
GWP - total	kg CO <sub>2</sub> eq.	1.38E+03	4.89E+01	9.27E+01	1.53E+03	0.00E+00	3.15E+00	1.93E+01	3.13E-01	-1.40E+03
ODP	kg CFC 11 eq.	3.15E-06	1.09E-05	1.55E-05	2.96E-05	0.00E+00	6.50E-07	2.59E-06	1.33E-07	-6.09E-05
AP	mol H+ eq.	2.74E+03	2.04E+00	3.48E+01	2.77E+03	0.00E+00	1.87E-01	3.98E+00	4.28E-01	-5.25E+01
EP - fresh water	kg P eq.	1.15E+04	7.29E+02	9.86E-02	1.32E+04	0.00E+00	4.62E+01	2.85E+02	9.19E+00	-1.44E+04
EP - fresh water	kg PO43- eq.	2.69E-01	3.88E-02	2.97E-01	6.05E-01	0.00E+00	3.75E-03	7.01E-02	4.68E-04	-2.46E+00
EP - salt water	kg N eq.	1.62E-03	1.70E-04	1.35E-03	3.14E-03	0.00E+00	1.11E-05	2.95E-03	7.86E-07	-8.08E-02
EP - ground	mol N eq.	1.36E+03	4.88E+01	8.54E+01	1.49E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03
POFP	kg NMVOC eq.	2.40E+00	2.17E-01	1.96E+00	4.58E+00	0.00E+00	2.02E-02	1.84E-01	2.86E-03	-6.52E+00
ADP - mineral & metals*	kg Sb eq.	1.28E-04	1.70E-04	1.35E-03	1.65E-03	0.00E+00	1.11E-05	2.95E-03	7.68E-07	-8.08E-02
ADP - fossil resources	MJ	3.36E+00	7.29E+02	9.86E+02	1.72E+03	0.00E+00	4.62E+01	2.85E+02	9.19E+00	-1.44E+04
WDP	m <sup>3</sup>	2.74E+03	2.13E+00	3.53E+01	2.77E+03	0.00E+00	1.96E-01	4.06E+00	4.29E-01	5.43E+01

## STAIRCASES

Indicator	Unit	A1	A2	A3	Tot. A1-A3	C1	C2	C3	C4	D
GWP - fossil	kg CO <sub>2</sub> eq.	2.49E+03	4.88E+01	1.21E+02	2.66E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.58E+03
GWP - biogen	kg CO <sub>2</sub> eq.	2.33E+01	1.22E-01	6.50E+00	2.99E+01	0.00E+00	7.58E-03	-1.43E+00	1.38E-03	3.02E+00
GWP - luluc	kg CO <sub>2</sub> eq.	8.56E-01	2.37E-02	3.66E-02	9.16E-01	0.00E+00	1.37E-03	2.40E-02	9.18E-05	-8.50E-01
GWP - total	kg CO <sub>2</sub> eq.	2.52E+03	4.89E+01	1.28E+02	2.70E+03	0.00E+00	3.15E+00	1.93E+01	3.13E-01	-1.40E+03
ODP	kg CFC 11 eq.	1.29E-06	1.09E-05	2.29E-05	3.51E-05	0.00E+00	6.50E-07	6.50E-07	2.59E-06	-1.33E-07
AP	mol H+ eq.	3.53E+02	2.04E+00	4.07E+01	3.96E+02	0.00E+00	2.02E-02	1.87E-01	3.98E+00	-4.28E-01
EP - fresh water	kg P eq.	2.50E+04	7.29E+02	1.90E+03	2.76E+04	0.00E+00	3.30E-04	4.62E+01	2.85E+02	9.19E-00
EP - fresh water	kg PO43- eq.	1.08E+00	3.88E-02	3.13E-01	1.44E+00	0.00E+00	3.75E-03	7.01E-02	4.68E-04	2.46E+00
EP - salt water	kg N eq.	3.94E-02	1.70E-04	1.36E-01	4.10E-02	0.00E+00	1.11E-05	2.95E-03	7.68E-07	-8.08E-02
EP - ground	mol N eq.	2.49E+03	4.88E+01	1.21E+02	2.66E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03
POFP	kg NMVOC eq.	4.74E+00	2.17E-01	2.15E+00	7.11E+00	0.00E+00	2.02E-02	1.84E-01	2.86E-03	-6.52E+00
ADP - mineral & metals*	kg Sb eq.	1.28E-04	1.70E-04	1.36E-03	1.66E-03	0.00E+00	1.11E-05	2.95E-03	7.68E-07	-8.08E-02
ADP - fossil resources	MJ	3.36E+00	7.29E+02	1.90E+03	2.63E+03	0.00E+00	4.62E+01	2.85E+02	9.19E+02	-1.44E+04
WDP	m <sup>3</sup>	3.53E+02	2.13E+00	4.12E+01	3.97E+02	0.00E+00	1.96E-01	4.06E+00	4.29E-01	-5.43E+01

\*GWP-fossil - Global uppvärmningspotential fossila bränslen / Global Warming Potential - fossil fuels - \*GWP-biogen - Global uppvärmningspotential biogena bränslen / Global Warming Potential - biogenic \*GWP-luluc - Global uppvärmningspotential markanvändning & förändrad markanvändning / Global Warming Potential - land use and land use change \*ODP - Utarmning potential för stratosfäriska ozonskiktet; / Ozone Depletion \*AP - Försurningspotential / Acidification \*EP-sötvatten - Övergödningspotential, fraktion av näringsämnen som når sötvatten / Eutrophication - aquatic freshwater \*EP-marin - Övergödningspotential, fraktion av näringsämnen som når marint vatten / Eutrophication - aquatic marine \*EP-mark - Övergödningspotential, mark / Eutrophication - terrestrial \*POFP - Formationspotential för troposfäriskt ozon / Photochemical zone formation \*ADP-mineraler & metaller - Abiotisk utarmning potential för icke-fossila resurser / Abiotic Depletion Potential - minerals and metals \*ADP-fossil - Abiotisk utarmning potential för fossila resurser / Abiotic Depletion Potential - fossil fuels \*WDP - Potential för vattenbrist (användare) / water use

# ENVIRONMENTAL IMPACT

Environmental impact for 1 tonne hot-dip galvanised steel products.

## GRATINGS

RESULTS PER DECLARED UNIT										
*Indicator	Unit	A1	A2	A3	Tot. A1-A3	C1	C2	C3	C4	D
Global warming Potential (GWP-GHG)	kg CO <sub>2</sub> eq.	2.46E+03	4.88E+01	1.21E+02	2.63E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03

## RAMPS

RESULTS PER DECLARED UNIT										
*Indicator	Unit	A1	A2	A3	Tot. 1-A3	C1	C2	C3	C4	D
Global warming Potential (GWP-GHG)	kg CO <sub>2</sub> eq.	2.09E+03	4.88E+01	1.22E+02	2.25E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03

## RAILINGS

RESULTS PER DECLARED UNIT										
*Indicator	Unit	A1	A2	A3	Tot. A1-A3	C1	C2	C3	C4	D
Global warming Potential (GWP-GHG)	kg CO <sub>2</sub> eq.	1.36E+03	4.88E+01	8.55E+01	1.50E+03	0.00E+00	3.14E+00	2.07E+01	3.12E-01	-1.40E+03

## STAIRCASES

RESULTS PER DECLARED UNIT										
*Indicator	Unit	A1	A2	A3	Tot. A1-A3	C1	C2	C3	C4	D
Global warming Potential (GWP-GHG)	kg CO <sub>2</sub> eq.	2.50E+03	4.88E+01	1.22E+01	2.67E+03	0.00E+00	-7.54E-03	2.07E+01	3.12E-01	-1.40E+03

\* This indicator accounts for all greenhouse gases except biogenic absorption and emission of carbon dioxide and biogenic carbon stored in the product. This means that the indicator is identical to GWP-Total except that the GWP for biogenic CO<sub>2</sub> is set to zero.



## SUMMARY IN ENGLISH

This EPD declares the environmental impacts from the production of .

Weland AB is a family company with a factory and head office in Smålandsstenar. A leading manufacturer and supplier of spiral stairs, straight stairs, railings, ramps and gratings in steel. Weland is also one of Sweden's largest players in the field of sheet metal working.

Weland AB is the parent company of 32 manufacturing companies in Sweden and 4 foreign subsidiaries. Significant for all companies included in the group is that they produce and sell Swedish-made products. Production and surface treatment plant for this scope is in Smålandsstenar and Ulricehamn.

**Declared product** Weland's galvanised steel product; spiral staircases, straight flight staircases, railings, ramps and grating.

**Declared unit** 1 ton galvanized steel products

**System boundaries** Cradle to gate with modules C1-C4 and D

---

## ENVIRONMENTAL PERFORMANCE

Potential environmental impact per 1 ton of galvanized steel products was calculated with the EN15804+A2 method. See page 8-9 for environmental performance.





## REFERENCES

PCR, EPD International – PCR 2019:14 – Construction products v1.1, 2020-09-14

ISO 14044:2006. Environmental Management – Life cycle assessment – Requirements and guidelines (SS-EN ISO 14044:2006). Swedish Standards Institute (SIS förlag AB): Stockholm, Sweden

SIS-CEN/TR 15941:2012. Sustainability for construction works – Environmental product declarations – Methodology and data for generic data. ICS: 91.010 99

SS-EN 15804:2012+A2:2019. Sustainability for construction works – Environmental product declarations – Core rules for the product category of construction products.

The International EPD System, 18/09/2019. General programme instructions for the international EPD System, 3.01

LCA report, Weland hot-dip galvanised steel products – Sweco 2021-02









## Environmental product declaration in accordance with ISO 14025

Programme: The International EPD® System, [www.environdec.com](http://www.environdec.com)  
Programme operator: EPD International AB  
EPD registration number: SP 03672  
Publication date: 22/10/2021  
Valid until: 22/10/2026

 **EPD**®  
THE INTERNATIONAL EPD® SYSTEM