Environmental Product Declaration
In accordance with ISO 14025:2006 and EN 15804:2012+A1:2019/AC:2021 for:

Solartag T-ROOF roof tiles
from
Solartag ApS

This appendix refers to the EPD S-P-09093, developed according to EN15804+A2:2019. Results in the appendix communicates LCA results in the format described in EN15804+A1:2013, in order to accommodate a need in the transition period between the two standard revisions. The appendix cannot stand alone, as the reference EPD describes the basis of the assessment.

Results of the environmental performance indicators – Functional Unit (1 Wp)

Mandatory impact category indicators according to EN15804+A1:2013 – Functional Unit (1 Wp)

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	kg CO_2 eq.	5.56E-01	1.03E-02	9.20E-04	0.00E+00	0.00E+00	3.59E-04	1.07E-02	9.98E-04	-7.83E-02
ODP	kg CFC 11 eq.	4.85E-08	1.97E-09	2.16E-11	0.00E+00	0.00E+00	7.16E-11	1.26E-10	2.51E-11	-6.40E-09
AP	mol SO_2- eq.	2.79E-03	3.54E-05	9.90E-07	0.00E+00	0.00E+00	9.37E-07	5.25E-06	7.91E-07	-5.16E-04
EP	kg PO_4^3 - eq.	3.71E-04	4.29E-06	3.96E-07	0.00E+00	0.00E+00	1.26E-07	1.05E-06	9.19E-07	-4.19E-05
POCP	kg ethene eq.	1.22E-04	1.49E-06	1.60E-07	0.00E+00	0.00E+00	4.36E-08	2.80E-07	2.12E-07	-1.97E-05
ADP-minerals&metals*	kg Sb eq.	3.22E-05	3.51E-08	9.24E-10	0.00E+00	0.00E+00	8.68E-10	8.66E-09	4.62E-10	-8.48E-07
ADP-fossil*	MJ	7.03E+00	1.60E-01	2.27E-03	0.00E+00	0.00E+00	5.79E-03	1.61E-02	2.48E-03	-9.00E-01
Acronyms	GWP = Global Warming Potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential									

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Resource use indicators

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	MJ	9.90E-01	2.40E-03	1.01E-04	0.00E+00	0.00E+00	7.51E-05	6.27E-03	5.76E-05	-1.20E-01
PERM	MJ	1.14E-01	0.00E+00	1.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.10E+00	2.40E-03	1.05E-01	0.00E+00	0.00E+00	7.51E-05	6.27E-03	5.76E-05	-1.20E-01
PENRE	MJ	8.01E+00	1.74E-01	-3.11E-03	0.00E+00	0.00E+00	6.27E-03	1.91E-02	2.71E-03	-1.03E+00
PENRM	MJ	3.09E-01	0.00E+00	5.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	8.32E+00	1.74E-01	2.58E-03	0.00E+00	0.00E+00	6.27E-03	1.91E-02	2.71E-03	-1.03E+00
SM	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
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	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	0.00E+00
FW	m^3	3.60E-01	5.74E-04	9.28E-06	0.00E+00	0.00E+00	2.03E-05	3.98E-04	1.03E-04	-1.95E-02
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

Waste indicators

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	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
Non-hazardous waste disposed	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
Radioactive waste disposed	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

Output flow indicators

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for re-use	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
Material for recycling	kg	2.08E-03	0.00E+00	2.85E-03	0.00E+00	0.00E+00	0.00E+00	6.54E-02	0.00E+00	0.00E+00
Materials for energy recovery	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
Exported energy, electricity	MJ	2.22E-03	0.00E+00	2.41E-03	0.00E+00	0.00E+00	0.00E+00	4.40E-03	0.00E+00	0.00E+00
Exported energy, thermal	MJ	2.13E-02	0.00E+00	2.32E-02	0.00E+00	0.00E+00	0.00E+00	4.22E-02	0.00E+00	0.00E+00

Results of the environmental performance indicators – Declared Unit (1 m^2)

Mandatory impact category indicators according to EN15804+A1:2013 – Declared Unit (1 m^2)

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	kg CO_2 eq.	7.09E+01	9.22E-01	1.29E-01	0.00E+00	0.00E+00	5.05E-02	1.50E+00	1.40E-01	-1.22E+01
ODP	kg CFC 11 eq.	5.44E-06	1.73E-07	3.05E-09	0.00E+00	0.00E+00	1.01E-08	1.77E-08	3.53E-09	-9.73E-07
AP	mol SO_2- eq.	3.67E-01	2.97E-03	1.39E-04	0.00E+00	0.00E+00	1.32E-04	7.39E-04	1.11E-04	-7.77E-02
EP	kg PO_4^3 - eq.	4.79E-02	3.59E-04	5.58E-05	0.00E+00	0.00E+00	1.77E-05	1.48E-04	1.29E-04	-6.52E-03
POCP	kg ethene eq.	1.64E-02	1.30E-04	2.25E-05	0.00E+00	0.00E+00	6.13E-06	3.94E-05	2.98E-05	-2.98E-03
ADP-minerals&metals*	kg Sb eq.	4.52E-03	3.69E-06	1.30E-07	0.00E+00	0.00E+00	1.22E-07	1.22E-06	6.50E-08	-1.29E-04
ADP-fossil*	MJ	8.79E+02	1.42E+01	3.20E-01	0.00E+00	0.00E+00	8.15E-01	2.26E+00	3.49E-01	-1.41E+02
Acronyms	GWP = Global Warming Potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential									

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Resource use indicators

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	MJ	1.38E+02	2.31E-01	1.41E-02	0.00E+00	0.00E+00	1.06E-02	8.82E-01	8.11E-03	-2.14E+01
PERM	MJ	1.61E+01	0.00E+00	1.48E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.54E+02	2.31E-01	1.48E+01	0.00E+00	0.00E+00	1.06E-02	8.82E-01	8.11E-03	-2.14E+01
PENRE	MJ	1.01E+03	1.54E+01	-4.38E-01	0.00E+00	0.00E+00	8.82E-01	2.68E+00	3.81E-01	-1.72E+02
PENRM	MJ	4.34E+01	0.00E+00	8.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.05E+03	1.54E+01	3.64E-01	0.00E+00	0.00E+00	8.82E-01	2.68E+00	3.81E-01	-1.72E+02
SM	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
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	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	0.00E+00
FW	m^3	5.05E+01	5.18E-02	1.31E-03	0.00E+00	0.00E+00	2.85E-03	5.59E-02	1.46E-02	-3.00E+00
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

Waste indicators

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	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
Non-hazardous waste disposed	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
Radioactive waste disposed	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

Output flow indicators

Results per functional or declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for re-use	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
Material for recycling	kg	2.93E-01	0.00E+00	4.01E-01	0.00E+00	0.00E+00	0.00E+00	9.20E+00	0.00E+00	0.00E+00
Materials for energy recovery	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
Exported energy, electricity	MJ	3.12E-01	0.00E+00	3.40E-01	0.00E+00	0.00E+00	0.00E+00	9.91E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	9.91E+00	0.00E+00	3.26E+00	0.00E+00	0.00E+00	0.00E+00	9.91E+00	0.00E+00	0.00E+00