

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.64



Product: 3070634 - PE Branch Reduced S12,5 45° 200x160

Unit: 1 piece

Manufacturer: Wavin - IT - SM Maddalena

LCA standard: EN15804+A2 (2019)

Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off

Externally verified: Yes

Issue date: 24-11-2022

End of validity: 24-11-2027

Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - IT - SM Maddalena (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☒	☒	☒	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☒	☒	☒	☒

Product stage

Use stage

End-of-Life stage

A1 Raw material supply A2 Transport A3 Manufacturing

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
B6 Operational energy use B7 Operational water use

C1 De-construction demolition C2 Transport C3 Waste processing
C4 Disposal

Construction process stage

A4 Transport gate to site

A5 Assembly / Construction installation process

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.98E+0	7.77E-1	4.58E-1	7.22E+0	8.04E-2	3.59E+0	4.45E-2	-3.91E+0	7.03E+0
GWP-f	kg CO2 eq	6.68E+0	7.77E-1	3.92E-1	7.85E+0	8.03E-2	2.65E+0	4.45E-2	-4.36E+0	6.26E+0
GWP-b	kg CO2 eq	-6.98E-1	4.40E-4	3.31E-2	-6.65E-1	4.88E-5	9.40E-1	3.34E-5	4.59E-1	7.35E-1
GWP-luluc	kg CO2 eq	4.91E-3	2.85E-4	3.31E-2	3.83E-2	2.84E-5	4.65E-4	6.38E-7	-4.57E-3	3.42E-2
ODP	kg CFC11 eq	4.07E-7	1.78E-7	3.93E-8	6.25E-7	1.85E-8	6.60E-8	9.49E-10	-2.38E-7	4.72E-7
AP	mol H+ eq	2.62E-2	5.45E-3	1.58E-3	3.32E-2	4.57E-4	2.72E-3	2.26E-5	-1.40E-2	2.25E-2
EP-fw	kg P eq	1.37E-4	6.22E-6	6.09E-6	1.49E-4	6.61E-7	1.36E-5	2.94E-8	-9.56E-5	6.80E-5
EP-m	kg N eq	4.86E-3	1.82E-3	2.67E-4	6.94E-3	1.64E-4	8.14E-4	1.60E-5	-2.72E-3	5.22E-3
EP-T	mol N eq	5.35E-2	2.00E-2	3.00E-3	7.66E-2	1.80E-3	8.95E-3	9.19E-5	-3.06E-2	5.68E-2
POCP	kg NMVOC eq	2.30E-2	5.63E-3	9.31E-4	2.96E-2	5.16E-4	2.81E-3	3.60E-5	-1.27E-2	2.02E-2
ADP-mm	kg Sb eq	9.08E-5	1.94E-5	9.54E-6	1.20E-4	2.08E-6	1.08E-5	2.27E-8	-3.08E-5	1.02E-4
ADP-f	MJ	2.25E+2	1.18E+1	5.15E+0	2.42E+2	1.23E+0	8.31E+0	6.93E-2	-1.26E+2	1.26E+2
WDP	m3 depriv.	4.87E+0	3.54E-2	1.82E+0	6.73E+0	3.78E-3	1.57E-1	3.17E-4	-3.04E+0	3.85E+0
PM	disease inc.	2.73E-7	6.78E-8	1.58E-8	3.56E-7	7.25E-9	4.44E-8	4.76E-10	-1.46E-7	2.63E-7
IR	kBq U-235 eq	2.14E-1	5.16E-2	4.81E-3	2.71E-1	5.39E-3	2.57E-2	3.23E-4	-1.07E-1	1.96E-1
ETP-fw	CTUe	1.02E+2	9.51E+0	8.13E+0	1.20E+2	1.00E+0	9.77E+0	6.11E-2	-5.62E+1	7.45E+1
HTP-c	CTUh	2.31E-9	3.48E-10	4.34E-10	3.09E-9	3.56E-11	1.13E-9	1.68E-12	-1.37E-9	2.88E-9
HTP-nc	CTUh	4.89E-8	1.12E-8	8.99E-9	6.91E-8	1.19E-9	1.41E-8	3.88E-11	-3.02E-8	5.43E-8
SQP	Pt	9.03E+1	9.77E+0	9.39E-1	1.01E+2	1.05E+0	6.54E+0	1.78E-1	-1.41E+2	-3.18E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.64E+1	1.66E-1	1.78E+1	3.44E+1	1.77E-2	4.01E-1	2.74E-3	-2.49E+1	9.90E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.64E+1	1.66E-1	1.78E+1	3.44E+1	1.77E-2	4.01E-1	2.74E-3	-2.49E+1	9.90E+0
PENRE	MJ	2.42E+2	1.26E+1	5.62E+0	2.60E+2	1.31E+0	8.85E+0	7.35E-2	-1.36E+2	1.34E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.42E+2	1.26E+1	5.62E+0	2.60E+2	1.31E+0	8.85E+0	7.35E-2	-1.36E+2	1.34E+2
PET	MJ	2.58E+2	1.27E+1	2.35E+1	2.94E+2	1.33E+0	9.25E+0	7.63E-2	-1.61E+2	1.44E+2
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	7.78E-2	1.31E-3	4.33E-2	1.22E-1	1.39E-4	4.72E-3	8.56E-5	-5.43E-2	7.31E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.77E-5	2.94E-5	5.01E-6	8.21E-5	3.15E-6	1.40E-5	8.32E-8	-4.52E-5	5.42E-5
NHWD	kg	3.59E-1	7.04E-1	4.88E-2	1.11E+0	7.64E-2	4.06E-1	3.05E-1	-1.64E-1	1.73E+0
RWD	kg	2.34E-4	8.05E-5	5.35E-6	3.19E-4	8.38E-6	3.30E-5	4.53E-7	-1.01E-4	2.60E-4
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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