

Environmental Profile

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

Ecochain v3.5.64



Product: 3067760 - SiTech+ Branch STEA 45° 110X110
 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



Wavin SiTech+ is a waste water system made of mineral- reinforced polypropylene (PP), which offers increased durability, but more importantly is quiet and easy to install.

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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

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

End-of-Life stage

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

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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.79E+0	3.33E-2	1.31E-1	1.96E+0	2.37E-2	1.01E+0	1.13E-2	-1.10E+0	1.90E+0
GWP-f	kg CO2 eq	1.98E+0	3.32E-2	1.12E-1	2.12E+0	2.36E-2	7.83E-1	1.13E-2	-1.19E+0	1.75E+0
GWP-b	kg CO2 eq	-1.84E-1	2.02E-5	9.48E-3	-1.74E-1	1.44E-5	2.30E-1	9.96E-6	8.72E-2	1.43E-1
GWP-luluc	kg CO2 eq	1.13E-3	1.18E-5	9.48E-3	1.06E-2	8.37E-6	1.34E-4	1.91E-7	-9.35E-4	9.83E-3
ODP	kg CFC11 eq	6.86E-8	7.66E-9	1.13E-8	8.75E-8	5.45E-9	1.86E-8	2.85E-10	-5.42E-8	5.77E-8
AP	mol H+ eq	7.41E-3	1.89E-4	4.53E-4	8.05E-3	1.35E-4	7.78E-4	6.80E-6	-3.66E-3	5.31E-3
EP-fw	kg P eq	3.57E-5	2.74E-7	1.74E-6	3.78E-5	1.95E-7	3.89E-6	8.81E-9	-2.10E-5	2.08E-5
EP-m	kg N eq	1.33E-3	6.78E-5	7.65E-5	1.47E-3	4.82E-5	2.32E-4	4.82E-6	-6.88E-4	1.07E-3
EP-T	mol N eq	1.47E-2	7.47E-4	8.59E-4	1.63E-2	5.31E-4	2.55E-3	2.76E-5	-7.71E-3	1.17E-2
POCP	kg NMVOC eq	6.44E-3	2.13E-4	2.67E-4	6.92E-3	1.52E-4	7.98E-4	1.04E-5	-3.24E-3	4.63E-3
ADP-mm	kg Sb eq	6.51E-5	8.60E-7	2.73E-6	6.87E-5	6.12E-7	3.05E-6	6.83E-9	-9.49E-6	6.29E-5
ADP-f	MJ	6.80E+1	5.10E-1	1.48E+0	7.00E+1	3.63E-1	2.37E+0	2.08E-2	-3.59E+1	3.69E+1
WDP	m3 depriv.	1.34E+0	1.57E-3	5.23E-1	1.86E+0	1.11E-3	4.63E-2	9.53E-5	-7.27E-1	1.19E+0
PM	disease inc.	7.22E-8	3.00E-9	4.53E-9	7.98E-8	2.13E-9	1.26E-8	1.43E-10	-3.75E-8	5.71E-8
IR	kBq U-235 eq	4.61E-2	2.23E-3	1.38E-3	4.97E-2	1.59E-3	7.28E-3	9.69E-5	-2.31E-2	3.56E-2
ETP-fw	CTUe	2.30E+1	4.14E-1	2.33E+0	2.57E+1	2.95E-1	2.89E+0	1.85E-2	-1.19E+1	1.70E+1
HTP-c	CTUh	5.74E-10	1.47E-11	1.24E-10	7.13E-10	1.05E-11	3.19E-10	5.04E-13	-3.04E-10	7.38E-10
HTP-nc	CTUh	1.42E-8	4.94E-10	2.58E-9	1.72E-8	3.51E-10	4.02E-9	1.14E-11	-7.51E-9	1.41E-8
SQP	Pt	2.24E+1	4.37E-1	2.69E-1	2.31E+1	3.11E-1	1.87E+0	5.35E-2	-3.07E+1	-5.34E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.08E+0	7.32E-3	5.11E+0	9.20E+0	5.21E-3	1.15E-1	8.18E-4	-5.39E+0	3.92E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.08E+0	7.32E-3	5.11E+0	9.20E+0	5.21E-3	1.15E-1	8.18E-4	-5.39E+0	3.92E+0
PENRE	MJ	7.30E+1	5.42E-1	1.61E+0	7.51E+1	3.85E-1	2.53E+0	2.21E-2	-3.87E+1	3.94E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.30E+1	5.42E-1	1.61E+0	7.51E+1	3.85E-1	2.53E+0	2.21E-2	-3.87E+1	3.94E+1
PET	MJ	7.70E+1	5.49E-1	6.72E+0	8.43E+1	3.91E-1	2.64E+0	2.29E-2	-4.40E+1	4.33E+1
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	2.14E-2	5.77E-5	1.24E-2	3.39E-2	4.11E-5	1.47E-3	2.57E-5	-1.25E-2	2.30E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.19E-5	1.30E-6	1.44E-6	1.47E-5	9.28E-7	4.01E-6	2.50E-8	-1.08E-5	8.81E-6
NHWD	kg	1.00E-1	3.16E-2	1.40E-2	1.46E-1	2.25E-2	1.18E-1	9.18E-2	-4.11E-2	3.37E-1
RWD	kg	4.54E-5	3.47E-6	1.53E-6	5.04E-5	2.47E-6	9.30E-6	1.36E-7	-2.16E-5	4.07E-5
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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