

Environmental Profile

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

Ecochain v3.5.64



Product: 3067754 - SiTech+ Branch Reduced STEA 45° 90X50
 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	6.67E-1	1.34E-2	4.70E-2	7.27E-1	8.57E-3	3.94E-1	4.15E-3	-4.00E-1	7.33E-1
GWP-f	kg CO2 eq	7.37E-1	1.34E-2	4.02E-2	7.91E-1	8.56E-3	3.03E-1	4.15E-3	-4.39E-1	6.68E-1
GWP-b	kg CO2 eq	-7.12E-2	8.12E-6	3.39E-3	-6.78E-2	5.20E-6	9.08E-2	3.65E-6	3.87E-2	6.16E-2
GWP-luluc	kg CO2 eq	4.68E-4	4.73E-6	3.39E-3	3.87E-3	3.03E-6	4.81E-5	7.02E-8	-3.90E-4	3.53E-3
ODP	kg CFC11 eq	3.11E-8	3.08E-9	4.03E-9	3.82E-8	1.97E-9	6.82E-9	1.05E-10	-2.11E-8	2.61E-8
AP	mol H+ eq	2.82E-3	7.61E-5	1.62E-4	3.06E-3	4.88E-5	2.85E-4	2.49E-6	-1.36E-3	2.04E-3
EP-fw	kg P eq	1.41E-5	1.10E-7	6.24E-7	1.48E-5	7.05E-8	1.41E-6	3.23E-9	-8.24E-6	8.04E-6
EP-m	kg N eq	5.09E-4	2.72E-5	2.74E-5	5.64E-4	1.75E-5	8.56E-5	1.85E-6	-2.58E-4	4.11E-4
EP-T	mol N eq	5.62E-3	3.00E-4	3.08E-4	6.23E-3	1.92E-4	9.41E-4	1.01E-5	-2.89E-3	4.49E-3
POCP	kg NMVOC eq	2.44E-3	8.58E-5	9.56E-5	2.62E-3	5.50E-5	2.94E-4	3.80E-6	-1.20E-3	1.78E-3
ADP-mm	kg Sb eq	3.23E-5	3.46E-7	9.79E-7	3.37E-5	2.22E-7	1.11E-6	2.50E-9	-3.75E-6	3.12E-5
ADP-f	MJ	2.51E+1	2.05E-1	5.29E-1	2.58E+1	1.31E-1	8.59E-1	7.63E-3	-1.31E+1	1.37E+1
WDP	m3 depriv.	4.96E-1	6.30E-4	1.87E-1	6.84E-1	4.03E-4	1.69E-2	3.49E-5	-2.71E-1	4.30E-1
PM	disease inc.	2.81E-8	1.21E-9	1.62E-9	3.10E-8	7.73E-10	4.57E-9	5.24E-11	-1.43E-8	2.21E-8
IR	kBq U-235 eq	1.89E-2	8.97E-4	4.93E-4	2.03E-2	5.74E-4	2.65E-3	3.55E-5	-8.85E-3	1.47E-2
ETP-fw	CTUe	9.67E+0	1.67E-1	8.35E-1	1.07E+1	1.07E-1	1.09E+0	7.03E-3	-4.87E+0	7.00E+0
HTP-c	CTUh	2.23E-10	5.93E-12	4.45E-11	2.74E-10	3.80E-12	1.15E-10	1.85E-13	-1.16E-10	2.77E-10
HTP-nc	CTUh	5.48E-9	1.99E-10	9.23E-10	6.60E-9	1.27E-10	1.46E-9	4.25E-12	-2.86E-9	5.33E-9
SQP	Pt	8.87E+0	1.76E-1	9.64E-2	9.15E+0	1.12E-1	6.74E-1	1.96E-2	-1.27E+1	-2.73E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.61E+0	2.94E-3	1.83E+0	3.44E+0	1.89E-3	4.16E-2	3.01E-4	-2.23E+0	1.26E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.61E+0	2.94E-3	1.83E+0	3.44E+0	1.89E-3	4.16E-2	3.01E-4	-2.23E+0	1.26E+0
PENRE	MJ	2.69E+1	2.18E-1	5.77E-1	2.77E+1	1.40E-1	9.15E-1	8.10E-3	-1.41E+1	1.47E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.69E+1	2.18E-1	5.77E-1	2.77E+1	1.40E-1	9.15E-1	8.10E-3	-1.41E+1	1.47E+1
PET	MJ	2.85E+1	2.21E-1	2.41E+0	3.11E+1	1.41E-1	9.57E-1	8.40E-3	-1.63E+1	1.59E+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	8.14E-3	2.32E-5	4.45E-3	1.26E-2	1.49E-5	5.60E-4	9.43E-6	-4.77E-3	8.42E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.82E-6	5.25E-7	5.14E-7	5.86E-6	3.36E-7	1.47E-6	9.16E-9	-4.17E-6	3.51E-6
NHWD	kg	3.97E-2	1.27E-2	5.01E-3	5.74E-2	8.15E-3	4.29E-2	3.36E-2	-1.56E-2	1.26E-1
RWD	kg	1.93E-5	1.40E-6	5.49E-7	2.13E-5	8.94E-7	3.39E-6	4.99E-8	-8.35E-6	1.72E-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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