

Environmental Profile

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

Ecochain v3.5.64



Product: 3078870 - SiTech+ Pipe STEM 50 L=0,25 S/PL
 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	3.12E-1	5.67E-3	2.25E-2	3.41E-1	4.05E-3	1.72E-1	1.94E-3	-1.87E-1	3.32E-1
GWP-f	kg CO2 eq	3.40E-1	5.67E-3	1.93E-2	3.65E-1	4.04E-3	1.35E-1	1.94E-3	-2.04E-1	3.02E-1
GWP-b	kg CO2 eq	-2.81E-2	3.44E-6	1.63E-3	-2.65E-2	2.45E-6	3.71E-2	1.70E-6	1.72E-2	2.77E-2
GWP-luluc	kg CO2 eq	2.05E-4	2.01E-6	1.63E-3	1.83E-3	1.43E-6	2.29E-5	3.28E-8	-1.74E-4	1.68E-3
ODP	kg CFC11 eq	1.23E-8	1.31E-9	1.93E-9	1.55E-8	9.32E-10	3.21E-9	4.88E-11	-9.42E-9	1.03E-8
AP	mol H+ eq	1.28E-3	3.23E-5	7.77E-5	1.39E-3	2.30E-5	1.34E-4	1.16E-6	-6.32E-4	9.16E-4
EP-fw	kg P eq	6.26E-6	4.66E-8	2.99E-7	6.61E-6	3.33E-8	6.66E-7	1.51E-9	-3.77E-6	3.54E-6
EP-m	kg N eq	2.31E-4	1.16E-5	1.31E-5	2.55E-4	8.24E-6	4.00E-5	8.30E-7	-1.19E-4	1.85E-4
EP-T	mol N eq	2.55E-3	1.27E-4	1.47E-4	2.82E-3	9.08E-5	4.40E-4	4.73E-6	-1.34E-3	2.02E-3
POCP	kg NMVOC eq	1.11E-3	3.64E-5	4.58E-5	1.19E-3	2.60E-5	1.38E-4	1.77E-6	-5.58E-4	7.99E-4
ADP-mm	kg Sb eq	1.17E-5	1.47E-7	4.69E-7	1.23E-5	1.05E-7	5.24E-7	1.17E-9	-1.65E-6	1.13E-5
ADP-f	MJ	1.17E+1	8.70E-2	2.54E-1	1.20E+1	6.21E-2	4.07E-1	3.56E-3	-6.14E+0	6.34E+0
WDP	m3 depriv.	2.30E-1	2.67E-4	8.97E-2	3.20E-1	1.90E-4	7.94E-3	1.63E-5	-1.27E-1	2.01E-1
PM	disease inc.	1.25E-8	5.12E-10	7.78E-10	1.38E-8	3.65E-10	2.16E-9	2.45E-11	-6.56E-9	9.81E-9
IR	kBq U-235 eq	8.06E-3	3.80E-4	2.36E-4	8.68E-3	2.71E-4	1.25E-3	1.66E-5	-4.06E-3	6.15E-3
ETP-fw	CTUe	4.22E+0	7.06E-2	4.00E-1	4.69E+0	5.04E-2	5.00E-1	3.19E-3	-2.19E+0	3.05E+0
HTP-c	CTUh	9.84E-11	2.51E-12	2.13E-11	1.22E-10	1.79E-12	5.47E-11	8.63E-14	-5.22E-11	1.27E-10
HTP-nc	CTUh	2.45E-9	8.42E-11	4.42E-10	2.98E-9	6.01E-11	6.90E-10	1.96E-12	-1.32E-9	2.41E-9
SQP	Pt	3.65E+0	7.44E-2	4.62E-2	3.77E+0	5.31E-2	3.20E-1	9.15E-3	-5.42E+0	-1.26E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.78E-1	1.25E-3	8.77E-1	1.56E+0	8.90E-4	1.97E-2	1.40E-4	-9.61E-1	6.16E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.78E-1	1.25E-3	8.77E-1	1.56E+0	8.90E-4	1.97E-2	1.40E-4	-9.61E-1	6.16E-1
PENRE	MJ	1.25E+1	9.24E-2	2.77E-1	1.29E+1	6.59E-2	4.33E-1	3.78E-3	-6.62E+0	6.77E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.25E+1	9.24E-2	2.77E-1	1.29E+1	6.59E-2	4.33E-1	3.78E-3	-6.62E+0	6.77E+0
PET	MJ	1.32E+1	9.36E-2	1.15E+0	1.44E+1	6.68E-2	4.53E-1	3.92E-3	-7.58E+0	7.38E+0
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	3.70E-3	9.84E-6	2.13E-3	5.84E-3	7.02E-6	2.54E-4	4.41E-6	-2.21E-3	3.90E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.08E-6	2.22E-7	2.46E-7	2.55E-6	1.59E-7	6.90E-7	4.28E-9	-1.87E-6	1.54E-6
NHWD	kg	1.75E-2	5.39E-3	2.40E-3	2.53E-2	3.85E-3	2.02E-2	1.57E-2	-7.08E-3	5.80E-2
RWD	kg	7.98E-6	5.92E-7	2.63E-7	8.83E-6	4.22E-7	1.60E-6	2.33E-8	-3.81E-6	7.07E-6
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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