

Environmental Profile

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

Ecochain v3.5.64



Product: 3078871 - SiTech+ Pipe STEM 110 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	1.29E+0	2.16E-2	9.55E-2	1.40E+0	1.70E-2	6.65E-1	8.12E-3	-7.94E-1	1.30E+0
GWP-f	kg CO2 eq	1.39E+0	2.16E-2	8.17E-2	1.49E+0	1.70E-2	5.43E-1	8.13E-3	-8.36E-1	1.22E+0
GWP-b	kg CO2 eq	-9.75E-2	1.31E-5	6.90E-3	-9.05E-2	1.03E-5	1.22E-1	7.12E-6	4.28E-2	7.45E-2
GWP-luluc	kg CO2 eq	6.69E-4	7.65E-6	6.90E-3	7.58E-3	6.03E-6	9.60E-5	1.37E-7	-5.18E-4	7.16E-3
ODP	kg CFC11 eq	4.10E-8	4.98E-9	8.20E-9	5.42E-8	3.92E-9	1.31E-8	2.04E-10	-3.61E-8	3.53E-8
AP	mol H+ eq	5.10E-3	1.23E-4	3.30E-4	5.55E-3	9.70E-5	5.49E-4	4.86E-6	-2.51E-3	3.69E-3
EP-fw	kg P eq	2.36E-5	1.78E-7	1.27E-6	2.50E-5	1.40E-7	2.79E-6	6.30E-9	-1.32E-5	1.47E-5
EP-m	kg N eq	8.96E-4	4.40E-5	5.57E-5	9.96E-4	3.47E-5	1.62E-4	3.37E-6	-4.66E-4	7.30E-4
EP-T	mol N eq	9.97E-3	4.85E-4	6.26E-4	1.11E-2	3.82E-4	1.79E-3	1.98E-5	-5.20E-3	8.07E-3
POCP	kg NMVOC eq	4.44E-3	1.39E-4	1.94E-4	4.78E-3	1.09E-4	5.61E-4	7.41E-6	-2.24E-3	3.21E-3
ADP-mm	kg Sb eq	3.78E-5	5.59E-7	1.99E-6	4.04E-5	4.40E-7	2.16E-6	4.88E-9	-6.36E-6	3.66E-5
ADP-f	MJ	4.83E+1	3.32E-1	1.08E+0	4.97E+1	2.61E-1	1.69E+0	1.49E-2	-2.56E+1	2.61E+1
WDP	m3 depriv.	9.48E-1	1.02E-3	3.80E-1	1.33E+0	8.02E-4	3.31E-2	6.82E-5	-4.96E-1	8.68E-1
PM	disease inc.	4.84E-8	1.95E-9	3.30E-9	5.37E-8	1.54E-9	8.91E-9	1.02E-10	-2.45E-8	3.97E-8
IR	kBq U-235 eq	3.02E-2	1.45E-3	1.00E-3	3.26E-2	1.14E-3	5.17E-3	6.93E-5	-1.51E-2	2.39E-2
ETP-fw	CTUe	1.35E+1	2.69E-1	1.70E+0	1.54E+1	2.12E-1	2.02E+0	1.30E-2	-6.92E+0	1.08E+1
HTP-c	CTUh	3.78E-10	9.58E-12	9.05E-11	4.78E-10	7.55E-12	2.27E-10	3.60E-13	-1.95E-10	5.18E-10
HTP-nc	CTUh	9.55E-9	3.21E-10	1.88E-9	1.18E-8	2.53E-10	2.86E-9	8.13E-12	-4.92E-9	9.95E-9
SQP	Pt	1.23E+1	2.84E-1	1.96E-1	1.28E+1	2.24E-1	1.34E+0	3.82E-2	-1.61E+1	-1.68E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.33E+0	4.76E-3	3.72E+0	6.05E+0	3.75E-3	8.26E-2	5.84E-4	-2.87E+0	3.27E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.33E+0	4.76E-3	3.72E+0	6.05E+0	3.75E-3	8.26E-2	5.84E-4	-2.87E+0	3.27E+0
PENRE	MJ	5.18E+1	3.52E-1	1.17E+0	5.33E+1	2.77E-1	1.80E+0	1.58E-2	-2.75E+1	2.79E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.18E+1	3.52E-1	1.17E+0	5.33E+1	2.77E-1	1.80E+0	1.58E-2	-2.75E+1	2.79E+1
PET	MJ	5.41E+1	3.57E-1	4.89E+0	5.94E+1	2.81E-1	1.89E+0	1.64E-2	-3.04E+1	3.11E+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	1.48E-2	3.75E-5	9.04E-3	2.39E-2	2.96E-5	1.03E-3	1.84E-5	-8.22E-3	1.68E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.63E-6	8.48E-7	1.05E-6	9.53E-6	6.68E-7	2.83E-6	1.79E-8	-7.20E-6	5.84E-6
NHWD	kg	6.54E-2	2.06E-2	1.02E-2	9.61E-2	1.62E-2	8.36E-2	6.57E-2	-2.67E-2	2.35E-1
RWD	kg	2.88E-5	2.26E-6	1.12E-6	3.22E-5	1.78E-6	6.59E-6	9.74E-8	-1.40E-5	2.66E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777