Environmental Profile

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

Ecochain v3.5.64

Product:	3078803 - SiTech+ Trap bend STSW 50x1 1/2"
Unit:	1 piece
Manufacturer:	Wavin - IT - SM Maddalena

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.

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

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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.15E-1	4.01E-3	2.15E-2	5.41E-1	1.79E-3	3.30E-1	8.44E-4	-2.48E-1	6.25E-1
GWP-f	kg CO2 eq	5.34E-1	4.00E-3	1.84E-2	5.57E-1	1.79E-3	3.12E-1	8.44E-4	-2.56E-1	6.16E-1
GWP-b	kg CO2 eq	-1.94E-2	2.43E-6	1.55E-3	-1.79E-2	1.09E-6	1.82E-2	7.36E-7	7.80E-3	8.15E-3
GWP-luluc	kg CO2 eq	4.15E-4	1.42E-6	1.55E-3	1.97E-3	6.34E-7	1.23E-5	1.41E-8	-8.86E-5	1.89E-3
ODP	kg CFC11 eq	2.15E-8	9.23E-10	1.84E-9	2.42E-8	4.12E-10	2.10E-9	2.12E-11	-2.07E-8	6.06E-9
AP	mol H+ eq	2.26E-3	2.28E-5	7.41E-5	2.36E-3	1.02E-5	1.02E-4	5.03E-7	-4.25E-4	2.05E-3
EP-fw	kg P eq	1.59E-5	3.30E-8	2.85E-7	1.63E-5	1.47E-8	3.67E-7	6.52E-10	-2.09E-6	1.46E-5
EP-m	kg N eq	4.06E-4	8.16E-6	1.25E-5	4.27E-4	3.65E-6	3.54E-5	3.30E-7	-9.55E-5	3.71E-4
EP-T	mol N eq	4.54E-3	8.99E-5	1.41E-4	4.77E-3	4.02E-5	3.92E-4	2.05E-6	-1.06E-3	4.14E-3
POCP	kg NMVOC eq	1.91E-3	2.57E-5	4.37E-5	1.98E-3	1.15E-5	1.16E-4	7.69E-7	-4.15E-4	1.70E-3
ADP-mm	kg Sb eq	5.83E-6	1.04E-7	4.47E-7	6.38E-6	4.63E-8	3.03E-7	5.06E-10	-7.39E-7	5.99E-6
ADP-f	MJ	1.47E+1	6.15E-2	2.42E-1	1.50E+1	2.75E-2	2.35E-1	1.54E-3	-5.63E+0	9.65E+0
WDP	m3 depriv.	2.88E-1	1.89E-4	8.55E-2	3.74E-1	8.43E-5	4.35E-3	7.06E-6	-7.10E-2	3.07E-1
PM	disease inc.	1.85E-8	3.61E-10	7.42E-10	1.96E-8	1.62E-10	1.43E-9	1.06E-11	-3.55E-9	1.77E-8
IR	kBq U-235 eq	1.63E-2	2.69E-4	2.25E-4	1.68E-2	1.20E-4	7.51E-4	7.17E-6	-2.79E-3	1.49E-2
ETP-fw	CTUe	7.05E+0	4.99E-2	3.81E-1	7.48E+0	2.23E-2	3.12E-1	1.29E-3	-1.24E+0	6.57E+0
HTP-c	CTUh	1.55E-10	1.78E-12	2.03E-11	1.77E-10	7.94E-13	5.80E-11	3.72E-14	-3.62E-11	2.00E-10
HTP-nc	CTUh	4.19E-9	5.95E-11	4.22E-10	4.67E-9	2.66E-11	5.94E-10	8.28E-13	-7.89E-10	4.50E-9
SQP	Pt	3.11E+0	5.26E-2	4.40E-2	3.20E+0	2.35E-2	1.87E-1	3.96E-3	-2.65E+0	7.67E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.25E-1	8.82E-4	8.36E-1	1.56E+0	3.94E-4	1.08E-2	6.02E-5	-4.65E-1	1.11E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.25E-1	8.82E-4	8.36E-1	1.56E+0	3.94E-4	1.08E-2	6.02E-5	-4.65E-1	1.11E+0
PENRE	MJ	1.58E+1	6.53E-2	2.64E-1	1.61E+1	2.92E-2	2.50E-1	1.64E-3	-6.15E+0	1.02E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.58E+1	6.53E-2	2.64E-1	1.61E+1	2.92E-2	2.50E-1	1.64E-3	-6.15E+0	1.02E+1
PET	MJ	1.65E+1	6.61E-2	1.10E+0	1.77E+1	2.96E-2	2.61E-1	1.70E-3	-6.61E+0	1.13E+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	6.14E-3	6.96E-6	2.03E-3	8.18E-3	3.11E-6	1.65E-4	1.91E-6	-1.26E-3	7.09E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.84E-6	1.57E-7	2.35E-7	7.23E-6	7.03E-8	4.57E-7	1.85E-9	-4.03E-6	3.73E-6
NHWD	kg	3.68E-2	3.81E-3	2.29E-3	4.29E-2	1.70E-3	2.24E-2	6.81E-3	-4.48E-3	6.93E-2
RWD	kg	1.41E-5	4.18E-7	2.51E-7	1.48E-5	1.87E-7	9.80E-7	1.01E-8	-2.91E-6	1.30E-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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