Environmental Profile

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

Ecochain v3.5.64

Product:	3078802 - SiTech+ Trap bend STSW 40x1 1/4"
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	1.36E-1	1.80E-3	8.88E-3	1.47E-1	1.26E-3	8.53E-2	5.96E-4	-7.42E-2	1.59E-1
GWP-f	kg CO2 eq	1.51E-1	1.80E-3	7.60E-3	1.60E-1	1.26E-3	6.61E-2	5.96E-4	-8.44E-2	1.43E-1
GWP-b	kg CO2 eq	-1.47E-2	1.09E-6	6.42E-4	-1.41E-2	7.67E-7	1.93E-2	5.20E-7	1.03E-2	1.55E-2
GWP-luluc	kg CO2 eq	1.26E-4	6.36E-7	6.41E-4	7.68E-4	4.47E-7	7.62E-6	9.99E-9	-9.23E-5	6.84E-4
ODP	kg CFC11 eq	5.08E-9	4.14E-10	7.62E-10	6.26E-9	2.91E-10	1.16E-9	1.49E-11	-5.01E-9	2.71E-9
AP	mol H+ eq	5.93E-4	1.02E-5	3.06E-5	6.34E-4	7.20E-6	4.90E-5	3.55E-7	-2.42E-4	4.49E-4
EP-fw	kg P eq	3.60E-6	1.48E-8	1.18E-7	3.73E-6	1.04E-8	2.24E-7	4.60E-10	-1.69E-6	2.28E-6
EP-m	kg N eq	1.12E-4	3.66E-6	5.18E-6	1.21E-4	2.58E-6	1.53E-5	2.33E-7	-4.86E-5	9.01E-5
EP-T	mol N eq	1.23E-3	4.03E-5	5.82E-5	1.33E-3	2.84E-5	1.69E-4	1.44E-6	-5.46E-4	9.78E-4
POCP	kg NMVOC eq	5.09E-4	1.15E-5	1.81E-5	5.38E-4	8.11E-6	5.21E-5	5.42E-7	-2.14E-4	3.85E-4
ADP-mm	kg Sb eq	1.89E-6	4.65E-8	1.85E-7	2.12E-6	3.27E-8	1.84E-7	3.57E-10	-5.02E-7	1.83E-6
ADP-f	MJ	4.70E+0	2.76E-2	1.00E-1	4.83E+0	1.94E-2	1.39E-1	1.09E-3	-2.30E+0	2.69E+0
WDP	m3 depriv.	9.24E-2	8.46E-5	3.54E-2	1.28E-1	5.95E-5	2.59E-3	4.99E-6	-4.91E-2	8.14E-2
PM	disease inc.	5.53E-9	1.62E-10	3.07E-10	6.00E-9	1.14E-10	7.72E-10	7.49E-12	-2.69E-9	4.21E-9
IR	kBq U-235 eq	3.76E-3	1.20E-4	9.33E-5	3.97E-3	8.48E-5	4.39E-4	5.06E-6	-1.71E-3	2.79E-3
ETP-fw	CTUe	2.42E+0	2.24E-2	1.58E-1	2.60E+0	1.57E-2	1.69E-1	9.12E-4	-1.11E+0	1.68E+0
HTP-c	CTUh	4.56E-11	7.97E-13	8.41E-12	5.48E-11	5.60E-13	2.18E-11	2.62E-14	-2.25E-11	5.47E-11
HTP-nc	CTUh	1.14E-9	2.67E-11	1.74E-10	1.34E-9	1.88E-11	2.56E-10	5.85E-13	-5.49E-10	1.07E-9
SQP	Pt	1.92E+0	2.36E-2	1.82E-2	1.96E+0	1.66E-2	1.09E-1	2.80E-3	-2.97E+0	-8.82E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.59E-1	3.96E-4	3.46E-1	7.05E-1	2.78E-4	6.60E-3	4.25E-5	-5.20E-1	1.92E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.59E-1	3.96E-4	3.46E-1	7.05E-1	2.78E-4	6.60E-3	4.25E-5	-5.20E-1	1.92E-1
PENRE	MJ	5.04E+0	2.93E-2	1.09E-1	5.18E+0	2.06E-2	1.49E-1	1.16E-3	-2.48E+0	2.87E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.04E+0	2.93E-2	1.09E-1	5.18E+0	2.06E-2	1.49E-1	1.16E-3	-2.48E+0	2.87E+0
PET	MJ	5.40E+0	2.97E-2	4.55E-1	5.88E+0	2.09E-2	1.55E-1	1.20E-3	-3.00E+0	3.06E+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	1.66E-3	3.12E-6	8.40E-4	2.50E-3	2.19E-6	8.20E-5	1.35E-6	-9.17E-4	1.67E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.35E-6	7.05E-8	9.72E-8	1.52E-6	4.96E-8	2.45E-7	1.31E-9	-9.93E-7	8.24E-7
NHWD	kg	9.37E-3	1.71E-3	9.47E-4	1.20E-2	1.20E-3	7.98E-3	4.81E-3	-2.96E-3	2.31E-2
RWD	kg	3.36E-6	1.87E-7	1.04E-7	3.65E-6	1.32E-7	5.67E-7	7.12E-9	-1.63E-6	2.72E-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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