Environmental Profile

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

Ecochain v3.5.64

Product:	3067803 - SiTech+ Coupler STMM 125 S/S
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	9.90E-1	1.45E-2	6.57E-2	1.07E+0	1.23E-2	6.13E-1	6.08E-3	-5.91E-1	1.11E+0
GWP-f	kg CO2 eq	1.09E+0	1.44E-2	5.62E-2	1.16E+0	1.23E-2	4.90E-1	6.08E-3	-6.34E-1	1.04E+0
GWP-b	kg CO2 eq	-1.01E-1	8.77E-6	4.75E-3	-9.64E-2	7.46E-6	1.22E-1	5.39E-6	4.37E-2	6.98E-2
GWP-luluc	kg CO2 eq	6.52E-4	5.11E-6	4.75E-3	5.41E-3	4.35E-6	6.74E-5	1.04E-7	-4.74E-4	5.00E-3
ODP	kg CFC11 eq	5.90E-8	3.33E-9	5.64E-9	6.80E-8	2.83E-9	9.55E-9	1.54E-10	-3.19E-8	4.86E-8
AP	mol H+ eq	4.29E-3	8.22E-5	2.27E-4	4.60E-3	7.00E-5	4.05E-4	3.68E-6	-1.87E-3	3.21E-3
EP-fw	kg P eq	2.14E-5	1.19E-7	8.74E-7	2.24E-5	1.01E-7	1.97E-6	4.77E-9	-1.07E-5	1.37E-5
EP-m	kg N eq	7.56E-4	2.94E-5	3.83E-5	8.24E-4	2.50E-5	1.22E-4	2.95E-6	-3.56E-4	6.17E-4
EP-T	mol N eq	8.41E-3	3.24E-4	4.31E-4	9.16E-3	2.76E-4	1.34E-3	1.49E-5	-3.99E-3	6.80E-3
POCP	kg NMVOC eq	3.69E-3	9.27E-5	1.34E-4	3.92E-3	7.89E-5	4.15E-4	5.58E-6	-1.67E-3	2.75E-3
ADP-mm	kg Sb eq	7.19E-5	3.74E-7	1.37E-6	7.36E-5	3.18E-7	1.54E-6	3.68E-9	-6.06E-6	6.94E-5
ADP-f	MJ	3.68E+1	2.22E-1	7.40E-1	3.78E+1	1.89E-1	1.20E+0	1.12E-2	-1.86E+1	2.06E+1
WDP	m3 depriv.	7.33E-1	6.80E-4	2.62E-1	9.96E-1	5.79E-4	2.44E-2	5.14E-5	-3.66E-1	6.55E-1
PM	disease inc.	4.34E-8	1.30E-9	2.27E-9	4.70E-8	1.11E-9	6.37E-9	7.71E-11	-1.91E-8	3.54E-8
IR	kBq U-235 eq	3.20E-2	9.69E-4	6.91E-4	3.37E-2	8.24E-4	3.69E-3	5.24E-5	-1.21E-2	2.62E-2
ETP-fw	CTUe	1.37E+1	1.80E-1	1.17E+0	1.51E+1	1.53E-1	1.61E+0	1.10E-2	-6.09E+0	1.08E+1
HTP-c	CTUh	3.44E-10	6.40E-12	6.23E-11	4.12E-10	5.45E-12	1.61E-10	2.74E-13	-1.59E-10	4.20E-10
HTP-nc	CTUh	8.40E-9	2.15E-10	1.29E-9	9.90E-9	1.83E-10	2.08E-9	6.43E-12	-3.84E-9	8.33E-9
SQP	Pt	1.24E+1	1.90E-1	1.35E-1	1.27E+1	1.61E-1	9.43E-1	2.88E-2	-1.59E+1	-2.02E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.24E+0	3.18E-3	2.56E+0	4.81E+0	2.71E-3	5.84E-2	4.47E-4	-2.78E+0	2.09E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.24E+0	3.18E-3	2.56E+0	4.81E+0	2.71E-3	5.84E-2	4.47E-4	-2.78E+0	2.09E+0
PENRE	MJ	3.95E+1	2.35E-1	8.07E-1	4.05E+1	2.00E-1	1.28E+0	1.19E-2	-2.01E+1	2.19E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.95E+1	2.35E-1	8.07E-1	4.05E+1	2.00E-1	1.28E+0	1.19E-2	-2.01E+1	2.19E+1
PET	MJ	4.17E+1	2.38E-1	3.37E+0	4.53E+1	2.03E-1	1.34E+0	1.24E-2	-2.29E+1	2.40E+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	1.24E-2	2.51E-5	6.22E-3	1.86E-2	2.13E-5	8.67E-4	1.39E-5	-6.33E-3	1.32E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.72E-6	5.67E-7	7.19E-7	9.01E-6	4.82E-7	2.09E-6	1.35E-8	-6.25E-6	5.35E-6
NHWD	kg	6.04E-2	1.37E-2	7.01E-3	8.12E-2	1.17E-2	6.12E-2	4.95E-2	-2.13E-2	1.82E-1
RWD	kg	3.47E-5	1.51E-6	7.68E-7	3.70E-5	1.28E-6	4.71E-6	7.34E-8	-1.15E-5	3.16E-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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