Environmental Profile

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

Ecochain v3.5.64

Product:	3067772 - SiTech+ Branch STEA 87,5° 40X40
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	1.80E-1	4.74E-3	1.16E-2	1.96E-1	2.22E-3	1.30E-1	1.11E-3	-1.05E-1	2.25E-1
GWP-f	kg CO2 eq	2.09E-1	4.74E-3	9.89E-3	2.24E-1	2.21E-3	9.35E-2	1.11E-3	-1.21E-1	1.99E-1
GWP-b	kg CO2 eq	-2.91E-2	2.88E-6	8.35E-4	-2.82E-2	1.35E-6	3.65E-2	9.83E-7	1.61E-2	2.43E-2
GWP-luluc	kg CO2 eq	1.73E-4	1.68E-6	8.35E-4	1.01E-3	7.84E-7	1.23E-5	1.89E-8	-1.48E-4	8.75E-4
ODP	kg CFC11 eq	1.30E-8	1.09E-9	9.92E-10	1.51E-8	5.10E-10	1.84E-9	2.80E-11	-6.71E-9	1.08E-8
AP	mol H+ eq	8.48E-4	2.70E-5	3.99E-5	9.15E-4	1.26E-5	7.74E-5	6.70E-7	-3.85E-4	6.21E-4
EP-fw	kg P eq	4.59E-6	3.90E-8	1.54E-7	4.78E-6	1.82E-8	3.62E-7	8.70E-10	-2.70E-6	2.46E-6
EP-m	kg N eq	1.57E-4	9.66E-6	6.74E-6	1.73E-4	4.51E-6	2.36E-5	5.54E-7	-7.57E-5	1.26E-4
EP-T	mol N eq	1.72E-3	1.06E-4	7.57E-5	1.90E-3	4.98E-5	2.60E-4	2.72E-6	-8.53E-4	1.36E-3
POCP	kg NMVOC eq	7.25E-4	3.04E-5	2.35E-5	7.79E-4	1.42E-5	8.02E-5	1.02E-6	-3.37E-4	5.38E-4
ADP-mm	kg Sb eq	1.51E-5	1.23E-7	2.41E-7	1.54E-5	5.73E-8	2.94E-7	6.71E-10	-1.23E-6	1.46E-5
ADP-f	MJ	6.86E+0	7.28E-2	1.30E-1	7.06E+0	3.40E-2	2.24E-1	2.05E-3	-3.45E+0	3.86E+0
WDP	m3 depriv.	1.37E-1	2.23E-4	4.60E-2	1.84E-1	1.04E-4	4.48E-3	9.38E-6	-7.77E-2	1.11E-1
PM	disease inc.	8.97E-9	4.28E-10	3.99E-10	9.80E-9	2.00E-10	1.21E-9	1.40E-11	-4.40E-9	6.82E-9
IR	kBq U-235 eq	6.63E-3	3.18E-4	1.21E-4	7.07E-3	1.49E-4	6.98E-4	9.55E-6	-2.76E-3	5.17E-3
ETP-fw	CTUe	3.64E+0	5.91E-2	2.05E-1	3.90E+0	2.76E-2	3.12E-1	2.06E-3	-1.76E+0	2.49E+0
HTP-c	CTUh	7.30E-11	2.10E-12	1.09E-11	8.60E-11	9.83E-13	3.00E-11	4.99E-14	-3.73E-11	7.98E-11
HTP-nc	CTUh	1.72E-9	7.04E-11	2.27E-10	2.02E-9	3.29E-11	3.89E-10	1.18E-12	-8.85E-10	1.55E-9
SQP	Pt	3.50E+0	6.22E-2	2.37E-2	3.59E+0	2.91E-2	1.73E-1	5.25E-3	-5.09E+0	-1.30E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.09E-1	1.04E-3	4.50E-1	1.06E+0	4.88E-4	1.07E-2	8.17E-5	-8.81E-1	1.90E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.09E-1	1.04E-3	4.50E-1	1.06E+0	4.88E-4	1.07E-2	8.17E-5	-8.81E-1	1.90E-1
PENRE	MJ	7.35E+0	7.72E-2	1.42E-1	7.57E+0	3.61E-2	2.38E-1	2.17E-3	-3.73E+0	4.12E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.35E+0	7.72E-2	1.42E-1	7.57E+0	3.61E-2	2.38E-1	2.17E-3	-3.73E+0	4.12E+0
PET	MJ	7.96E+0	7.83E-2	5.92E-1	8.63E+0	3.66E-2	2.49E-1	2.25E-3	-4.61E+0	4.31E+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	2.41E-3	8.23E-6	1.09E-3	3.51E-3	3.85E-6	1.65E-4	2.53E-6	-1.45E-3	2.23E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.69E-6	1.86E-7	1.26E-7	2.01E-6	8.70E-8	4.00E-7	2.45E-9	-1.32E-6	1.18E-6
NHWD	kg	1.32E-2	4.51E-3	1.23E-3	1.90E-2	2.11E-3	1.14E-2	9.01E-3	-4.90E-3	3.66E-2
RWD	kg	7.32E-6	4.95E-7	1.35E-7	7.95E-6	2.31E-7	8.97E-7	1.34E-8	-2.66E-6	6.43E-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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