Environmental Profile

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

Ecochain v3.5.64

Product:	3067814 - SiTech+ Reducer STR TYPE A 50X40
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	1.12E-1	2.64E-3	7.50E-3	1.22E-1	1.40E-3	7.34E-2	6.89E-4	-6.60E-2	1.32E-1
GWP-f	kg CO2 eq	1.27E-1	2.64E-3	6.42E-3	1.36E-1	1.40E-3	5.51E-2	6.89E-4	-7.40E-2	1.19E-1
GWP-b	kg CO2 eq	-1.44E-2	1.60E-6	5.42E-4	-1.39E-2	8.48E-7	1.82E-2	6.10E-7	7.98E-3	1.23E-2
GWP-luluc	kg CO2 eq	9.18E-5	9.35E-7	5.42E-4	6.35E-4	4.94E-7	7.78E-6	1.17E-8	-7.64E-5	5.67E-4
ODP	kg CFC11 eq	6.88E-9	6.09E-10	6.44E-10	8.14E-9	3.22E-10	1.13E-9	1.74E-11	-3.85E-9	5.76E-9
AP	mol H+ eq	5.01E-4	1.51E-5	2.59E-5	5.42E-4	7.96E-6	4.76E-5	4.17E-7	-2.30E-4	3.68E-4
EP-fw	kg P eq	2.61E-6	2.17E-8	9.98E-8	2.73E-6	1.15E-8	2.28E-7	5.41E-10	-1.50E-6	1.47E-6
EP-m	kg N eq	9.12E-5	5.39E-6	4.37E-6	1.01E-4	2.85E-6	1.44E-5	3.30E-7	-4.45E-5	7.40E-5
EP-T	mol N eq	1.01E-3	5.93E-5	4.92E-5	1.11E-3	3.14E-5	1.58E-4	1.69E-6	-5.00E-4	8.05E-4
POCP	kg NMVOC eq	4.30E-4	1.70E-5	1.53E-5	4.63E-4	8.97E-6	4.91E-5	6.32E-7	-2.03E-4	3.19E-4
ADP-mm	kg Sb eq	7.83E-6	6.84E-8	1.56E-7	8.06E-6	3.61E-8	1.82E-7	4.17E-10	-7.04E-7	7.57E-6
ADP-f	MJ	4.22E+0	4.06E-2	8.45E-2	4.35E+0	2.14E-2	1.40E-1	1.27E-3	-2.15E+0	2.36E+0
WDP	m3 depriv.	8.41E-2	1.24E-4	2.99E-2	1.14E-1	6.58E-5	2.79E-3	5.83E-6	-4.62E-2	7.09E-2
PM	disease inc.	5.16E-9	2.39E-10	2.59E-10	5.66E-9	1.26E-10	7.49E-10	8.74E-12	-2.52E-9	4.03E-9
IR	kBq U-235 eq	3.71E-3	1.77E-4	7.88E-5	3.97E-3	9.37E-5	4.34E-4	5.94E-6	-1.57E-3	2.93E-3
ETP-fw	CTUe	1.93E+0	3.29E-2	1.33E-1	2.09E+0	1.74E-2	1.88E-1	1.24E-3	-9.32E-1	1.37E+0
HTP-c	CTUh	4.14E-11	1.17E-12	7.11E-12	4.97E-11	6.20E-13	1.88E-11	3.10E-14	-2.09E-11	4.82E-11
HTP-nc	CTUh	9.96E-10	3.93E-11	1.47E-10	1.18E-9	2.08E-11	2.42E-10	7.26E-13	-5.06E-10	9.40E-10
SQP	Pt	1.78E+0	3.47E-2	1.54E-2	1.83E+0	1.83E-2	1.09E-1	3.26E-3	-2.56E+0	-6.00E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.16E-1	5.82E-4	2.92E-1	6.08E-1	3.08E-4	6.75E-3	5.06E-5	-4.46E-1	1.70E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.16E-1	5.82E-4	2.92E-1	6.08E-1	3.08E-4	6.75E-3	5.06E-5	-4.46E-1	1.70E-1
PENRE	MJ	4.53E+0	4.31E-2	9.22E-2	4.66E+0	2.28E-2	1.49E-1	1.35E-3	-2.32E+0	2.51E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.53E+0	4.31E-2	9.22E-2	4.66E+0	2.28E-2	1.49E-1	1.35E-3	-2.32E+0	2.51E+0
PET	MJ	4.84E+0	4.36E-2	3.85E-1	5.27E+0	2.31E-2	1.56E-1	1.40E-3	-2.77E+0	2.68E+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	1.44E-3	4.59E-6	7.10E-4	2.15E-3	2.43E-6	9.87E-5	1.57E-6	-8.37E-4	1.42E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.38E-7	1.04E-7	8.21E-8	1.12E-6	5.48E-8	2.46E-7	1.53E-9	-7.58E-7	6.68E-7
NHWD	kg	7.44E-3	2.51E-3	8.00E-4	1.08E-2	1.33E-3	7.09E-3	5.61E-3	-2.77E-3	2.20E-2
RWD	kg	4.00E-6	2.76E-7	8.77E-8	4.36E-6	1.46E-7	5.56E-7	8.32E-9	-1.50E-6	3.57E-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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