Environmental Profile

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

Ecochain v3.5.64

Product:	3076497 - SiTech+ Reducer STR TYPE B 110X50
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	1.86E-1	4.11E-3	1.31E-2	2.03E-1	2.39E-3	1.24E-1	1.16E-3	-1.10E-1	2.20E-1
GWP-f	kg CO2 eq	2.14E-1	4.11E-3	1.12E-2	2.30E-1	2.38E-3	8.69E-2	1.16E-3	-1.27E-1	1.93E-1
GWP-b	kg CO2 eq	-2.87E-2	2.49E-6	9.44E-4	-2.78E-2	1.45E-6	3.71E-2	1.02E-6	1.74E-2	2.68E-2
GWP-luluc	kg CO2 eq	1.74E-4	1.45E-6	9.43E-4	1.12E-3	8.44E-7	1.36E-5	1.97E-8	-1.59E-4	9.74E-4
ODP	kg CFC11 eq	1.02E-8	9.47E-10	1.12E-9	1.22E-8	5.50E-10	2.00E-9	2.92E-11	-6.58E-9	8.25E-9
AP	mol H+ eq	8.39E-4	2.34E-5	4.51E-5	9.07E-4	1.36E-5	8.31E-5	6.98E-7	-4.16E-4	5.88E-4
EP-fw	kg P eq	4.46E-6	3.38E-8	1.74E-7	4.67E-6	1.96E-8	3.98E-7	9.06E-10	-2.92E-6	2.16E-6
EP-m	kg N eq	1.57E-4	8.37E-6	7.61E-6	1.73E-4	4.86E-6	2.52E-5	5.25E-7	-8.12E-5	1.22E-4
EP-T	mol N eq	1.72E-3	9.23E-5	8.55E-5	1.90E-3	5.36E-5	2.77E-4	2.83E-6	-9.14E-4	1.32E-3
POCP	kg NMVOC eq	7.21E-4	2.64E-5	2.66E-5	7.74E-4	1.53E-5	8.61E-5	1.06E-6	-3.63E-4	5.14E-4
ADP-mm	kg Sb eq	1.00E-5	1.06E-7	2.72E-7	1.04E-5	6.17E-8	3.23E-7	7.00E-10	-1.14E-6	9.65E-6
ADP-f	MJ	7.13E+0	6.31E-2	1.47E-1	7.34E+0	3.66E-2	2.45E-1	2.14E-3	-3.72E+0	3.91E+0
WDP	m3 depriv.	1.42E-1	1.94E-4	5.20E-2	1.94E-1	1.12E-4	4.77E-3	9.78E-6	-8.52E-2	1.14E-1
PM	disease inc.	8.66E-9	3.71E-10	4.51E-10	9.49E-9	2.15E-10	1.32E-9	1.47E-11	-4.75E-9	6.29E-9
IR	kBq U-235 eq	5.80E-3	2.76E-4	1.37E-4	6.22E-3	1.60E-4	7.65E-4	9.95E-6	-2.94E-3	4.22E-3
ETP-fw	CTUe	3.60E+0	5.12E-2	2.32E-1	3.88E+0	2.97E-2	3.17E-1	1.99E-3	-1.89E+0	2.34E+0
HTP-c	CTUh	7.04E-11	1.82E-12	1.24E-11	8.46E-11	1.06E-12	3.31E-11	5.18E-14	-3.94E-11	7.94E-11
HTP-nc	CTUh	1.67E-9	6.10E-11	2.57E-10	1.99E-9	3.54E-11	4.19E-10	1.20E-12	-9.55E-10	1.49E-9
SQP	Pt	3.50E+0	5.40E-2	2.68E-2	3.58E+0	3.13E-2	1.91E-1	5.48E-3	-5.35E+0	-1.55E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.14E-1	9.05E-4	5.09E-1	1.12E+0	5.25E-4	1.17E-2	8.44E-5	-9.31E-1	2.05E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.14E-1	9.05E-4	5.09E-1	1.12E+0	5.25E-4	1.17E-2	8.44E-5	-9.31E-1	2.05E-1
PENRE	MJ	7.65E+0	6.70E-2	1.60E-1	7.87E+0	3.89E-2	2.61E-1	2.27E-3	-4.00E+0	4.17E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.65E+0	6.70E-2	1.60E-1	7.87E+0	3.89E-2	2.61E-1	2.27E-3	-4.00E+0	4.17E+0
PET	MJ	8.26E+0	6.79E-2	6.69E-1	9.00E+0	3.94E-2	2.73E-1	2.35E-3	-4.94E+0	4.38E+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	2.39E-3	7.14E-6	1.24E-3	3.63E-3	4.14E-6	1.61E-4	2.64E-6	-1.58E-3	2.22E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.56E-6	1.61E-7	1.43E-7	1.87E-6	9.36E-8	4.28E-7	2.56E-9	-1.31E-6	1.08E-6
NHWD	kg	1.28E-2	3.91E-3	1.39E-3	1.81E-2	2.27E-3	1.22E-2	9.41E-3	-5.21E-3	3.68E-2
RWD	kg	6.03E-6	4.29E-7	1.53E-7	6.61E-6	2.49E-7	9.83E-7	1.40E-8	-2.79E-6	5.07E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777