Environmental Profile

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

Ecochain v3.5.64

Product:	3067818 - SiTech+ Reducer STR TYPE A 125X110
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	7.75E-1	1.53E-2	5.73E-2	8.48E-1	1.03E-2	4.70E-1	4.96E-3	-4.81E-1	8.52E-1
GWP-f	kg CO2 eq	8.75E-1	1.53E-2	4.91E-2	9.39E-1	1.03E-2	3.47E-1	4.96E-3	-5.25E-1	7.77E-1
GWP-b	kg CO2 eq	-9.98E-2	9.29E-6	4.14E-3	-9.57E-2	6.26E-6	1.23E-1	4.35E-6	4.39E-2	7.07E-2
GWP-luluc	kg CO2 eq	5.41E-4	5.41E-6	4.14E-3	4.69E-3	3.65E-6	5.83E-5	8.37E-8	-4.57E-4	4.29E-3
ODP	kg CFC11 eq	3.25E-8	3.52E-9	4.92E-9	4.10E-8	2.38E-9	8.21E-9	1.25E-10	-2.46E-8	2.71E-8
AP	mol H+ eq	3.31E-3	8.71E-5	1.98E-4	3.59E-3	5.87E-5	3.43E-4	2.98E-6	-1.64E-3	2.36E-3
EP-fw	kg P eq	1.63E-5	1.26E-7	7.62E-7	1.72E-5	8.49E-8	1.70E-6	3.86E-9	-9.79E-6	9.16E-6
EP-m	kg N eq	5.98E-4	3.12E-5	3.34E-5	6.63E-4	2.10E-5	1.02E-4	2.13E-6	-3.11E-4	4.77E-4
EP-T	mol N eq	6.61E-3	3.44E-4	3.76E-4	7.33E-3	2.32E-4	1.13E-3	1.21E-5	-3.49E-3	5.21E-3
POCP	kg NMVOC eq	2.87E-3	9.82E-5	1.17E-4	3.09E-3	6.62E-5	3.52E-4	4.53E-6	-1.45E-3	2.06E-3
ADP-mm	kg Sb eq	3.11E-5	3.96E-7	1.19E-6	3.27E-5	2.67E-7	1.34E-6	2.99E-9	-4.30E-6	3.00E-5
ADP-f	MJ	2.99E+1	2.35E-1	6.46E-1	3.08E+1	1.58E-1	1.04E+0	9.11E-3	-1.57E+1	1.62E+1
WDP	m3 depriv.	5.90E-1	7.21E-4	2.28E-1	8.19E-1	4.86E-4	2.03E-2	4.17E-5	-3.25E-1	5.14E-1
PM	disease inc.	3.27E-8	1.38E-9	1.98E-9	3.61E-8	9.31E-10	5.52E-9	6.26E-11	-1.72E-8	2.54E-8
IR	kBq U-235 eq	2.10E-2	1.03E-3	6.02E-4	2.27E-2	6.92E-4	3.20E-3	4.24E-5	-1.05E-2	1.60E-2
ETP-fw	CTUe	1.10E+1	1.91E-1	1.02E+0	1.22E+1	1.29E-1	1.28E+0	8.18E-3	-5.71E+0	7.87E+0
HTP-c	CTUh	2.65E-10	6.78E-12	5.43E-11	3.26E-10	4.57E-12	1.40E-10	2.20E-13	-1.43E-10	3.27E-10
HTP-nc	CTUh	6.39E-9	2.27E-10	1.13E-9	7.74E-9	1.53E-10	1.76E-9	5.02E-12	-3.45E-9	6.22E-9
SQP	Pt	1.17E+1	2.01E-1	1.18E-1	1.20E+1	1.35E-1	8.17E-1	2.34E-2	-1.58E+1	-2.83E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.07E+0	3.37E-3	2.23E+0	4.31E+0	2.27E-3	5.03E-2	3.58E-4	-2.75E+0	1.61E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.07E+0	3.37E-3	2.23E+0	4.31E+0	2.27E-3	5.03E-2	3.58E-4	-2.75E+0	1.61E+0
PENRE	MJ	3.21E+1	2.49E-1	7.04E-1	3.30E+1	1.68E-1	1.11E+0	9.66E-3	-1.70E+1	1.73E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.21E+1	2.49E-1	7.04E-1	3.30E+1	1.68E-1	1.11E+0	9.66E-3	-1.70E+1	1.73E+1
PET	MJ	3.41E+1	2.53E-1	2.94E+0	3.73E+1	1.70E-1	1.16E+0	1.00E-2	-1.97E+1	1.90E+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	9.53E-3	2.66E-5	5.43E-3	1.50E-2	1.79E-5	6.53E-4	1.13E-5	-5.68E-3	9.98E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.54E-6	6.00E-7	6.27E-7	6.77E-6	4.05E-7	1.77E-6	1.09E-8	-4.93E-6	4.02E-6
NHWD	kg	4.63E-2	1.46E-2	6.11E-3	6.69E-2	9.81E-3	5.16E-2	4.01E-2	-1.91E-2	1.49E-1
RWD	kg	2.10E-5	1.60E-6	6.70E-7	2.32E-5	1.08E-6	4.09E-6	5.95E-8	-9.94E-6	1.85E-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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