Environmental Profile

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

Ecochain v3.5.64

Product:	3067815 - SiTech+ Reducer STR TYPE A 75X50
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	2.10E-1	4.41E-3	1.49E-2	2.29E-1	2.70E-3	1.33E-1	1.31E-3	-1.25E-1	2.42E-1
GWP-f	kg CO2 eq	2.38E-1	4.40E-3	1.27E-2	2.55E-1	2.70E-3	9.61E-2	1.31E-3	-1.42E-1	2.14E-1
GWP-b	kg CO2 eq	-2.86E-2	2.67E-6	1.07E-3	-2.75E-2	1.64E-6	3.71E-2	1.15E-6	1.74E-2	2.70E-2
GWP-luluc	kg CO2 eq	1.80E-4	1.56E-6	1.07E-3	1.25E-3	9.56E-7	1.53E-5	2.22E-8	-1.62E-4	1.11E-3
ODP	kg CFC11 eq	1.06E-8	1.02E-9	1.28E-9	1.29E-8	6.22E-10	2.23E-9	3.30E-11	-7.12E-9	8.63E-9
AP	mol H+ eq	9.23E-4	2.51E-5	5.13E-5	9.99E-4	1.54E-5	9.27E-5	7.87E-7	-4.57E-4	6.51E-4
EP-fw	kg P eq	4.80E-6	3.62E-8	1.98E-7	5.04E-6	2.22E-8	4.49E-7	1.02E-9	-3.08E-6	2.43E-6
EP-m	kg N eq	1.71E-4	8.98E-6	8.66E-6	1.89E-4	5.50E-6	2.80E-5	5.83E-7	-8.84E-5	1.34E-4
EP-T	mol N eq	1.88E-3	9.89E-5	9.73E-5	2.07E-3	6.07E-5	3.08E-4	3.20E-6	-9.94E-4	1.45E-3
POCP	kg NMVOC eq	7.95E-4	2.83E-5	3.02E-5	8.54E-4	1.73E-5	9.59E-5	1.20E-6	-4.00E-4	5.68E-4
ADP-mm	kg Sb eq	1.03E-5	1.14E-7	3.10E-7	1.08E-5	6.99E-8	3.61E-7	7.89E-10	-1.23E-6	9.96E-6
ADP-f	MJ	7.99E+0	6.76E-2	1.67E-1	8.23E+0	4.15E-2	2.76E-1	2.41E-3	-4.18E+0	4.37E+0
WDP	m3 depriv.	1.59E-1	2.08E-4	5.92E-2	2.18E-1	1.27E-4	5.37E-3	1.10E-5	-9.32E-2	1.30E-1
PM	disease inc.	9.40E-9	3.98E-10	5.14E-10	1.03E-8	2.44E-10	1.48E-9	1.65E-11	-5.10E-9	6.96E-9
IR	kBq U-235 eq	6.23E-3	2.96E-4	1.56E-4	6.68E-3	1.81E-4	8.58E-4	1.12E-5	-3.15E-3	4.58E-3
ETP-fw	CTUe	3.72E+0	5.49E-2	2.64E-1	4.04E+0	3.37E-2	3.52E-1	2.22E-3	-1.95E+0	2.48E+0
HTP-c	CTUh	7.57E-11	1.95E-12	1.41E-11	9.18E-11	1.20E-12	3.72E-11	5.84E-14	-4.18E-11	8.84E-11
HTP-nc	CTUh	1.82E-9	6.55E-11	2.92E-10	2.18E-9	4.01E-11	4.71E-10	1.34E-12	-1.02E-9	1.67E-9
SQP	Pt	3.53E+0	5.79E-2	3.05E-2	3.62E+0	3.55E-2	2.16E-1	6.18E-3	-5.36E+0	-1.49E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.26E-1	9.70E-4	5.79E-1	1.21E+0	5.95E-4	1.33E-2	9.50E-5	-9.36E-1	2.84E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.26E-1	9.70E-4	5.79E-1	1.21E+0	5.95E-4	1.33E-2	9.50E-5	-9.36E-1	2.84E-1
PENRE	MJ	8.58E+0	7.18E-2	1.83E-1	8.83E+0	4.40E-2	2.94E-1	2.55E-3	-4.50E+0	4.67E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.58E+0	7.18E-2	1.83E-1	8.83E+0	4.40E-2	2.94E-1	2.55E-3	-4.50E+0	4.67E+0
PET	MJ	9.20E+0	7.28E-2	7.61E-1	1.00E+1	4.46E-2	3.07E-1	2.65E-3	-5.44E+0	4.95E+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	2.64E-3	7.65E-6	1.41E-3	4.05E-3	4.69E-6	1.79E-4	2.98E-6	-1.70E-3	2.54E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.66E-6	1.73E-7	1.63E-7	2.00E-6	1.06E-7	4.78E-7	2.89E-9	-1.41E-6	1.17E-6
NHWD	kg	1.37E-2	4.19E-3	1.58E-3	1.95E-2	2.57E-3	1.38E-2	1.06E-2	-5.57E-3	4.08E-2
RWD	kg	6.40E-6	4.60E-7	1.74E-7	7.04E-6	2.82E-7	1.10E-6	1.57E-8	-2.99E-6	5.45E-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

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