

Environmental Profile

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

Ecochain v3.5.64



Product: 3067801 - SiTech+ Coupler STMM 90 S/S
 Unit: 1 piece
 Manufacturer: Wavin - IT - SM Maddalena

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



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.

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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.68E-1	1.17E-2	2.99E-2	5.09E-1	5.67E-3	3.11E-1	2.83E-3	-2.69E-1	5.60E-1
GWP-f	kg CO2 eq	5.26E-1	1.17E-2	2.56E-2	5.63E-1	5.67E-3	2.37E-1	2.83E-3	-3.04E-1	5.04E-1
GWP-b	kg CO2 eq	-5.80E-2	7.09E-6	2.16E-3	-5.58E-2	3.44E-6	7.42E-2	2.51E-6	3.48E-2	5.32E-2
GWP-luluc	kg CO2 eq	3.96E-4	4.13E-6	2.16E-3	2.56E-3	2.01E-6	3.13E-5	4.83E-8	-3.26E-4	2.27E-3
ODP	kg CFC11 eq	3.19E-8	2.69E-9	2.56E-9	3.71E-8	1.31E-9	4.61E-9	7.16E-11	-1.64E-8	2.67E-8
AP	mol H+ eq	2.12E-3	6.65E-5	1.03E-4	2.29E-3	3.23E-5	1.94E-4	1.71E-6	-9.41E-4	1.57E-3
EP-fw	kg P eq	1.12E-5	9.61E-8	3.97E-7	1.17E-5	4.67E-8	9.20E-7	2.22E-9	-6.27E-6	6.37E-6
EP-m	kg N eq	3.84E-4	2.38E-5	1.74E-5	4.26E-4	1.16E-5	5.91E-5	1.41E-6	-1.83E-4	3.15E-4
EP-T	mol N eq	4.24E-3	2.62E-4	1.96E-4	4.70E-3	1.27E-4	6.50E-4	6.94E-6	-2.06E-3	3.42E-3
POCP	kg NMVOC eq	1.81E-3	7.50E-5	6.08E-5	1.94E-3	3.64E-5	2.01E-4	2.60E-6	-8.26E-4	1.36E-3
ADP-mm	kg Sb eq	3.77E-5	3.02E-7	6.22E-7	3.86E-5	1.47E-7	7.39E-7	1.71E-9	-3.05E-6	3.65E-5
ADP-f	MJ	1.74E+1	1.79E-1	3.36E-1	1.79E+1	8.70E-2	5.66E-1	5.23E-3	-8.75E+0	9.82E+0
WDP	m3 depriv.	3.48E-1	5.50E-4	1.19E-1	4.68E-1	2.67E-4	1.14E-2	2.40E-5	-1.89E-1	2.90E-1
PM	disease inc.	2.20E-8	1.05E-9	1.03E-9	2.41E-8	5.12E-10	3.03E-9	3.59E-11	-1.04E-8	1.73E-8
IR	kBq U-235 eq	1.64E-2	7.84E-4	3.14E-4	1.75E-2	3.80E-4	1.76E-3	2.44E-5	-6.55E-3	1.31E-2
ETP-fw	CTUe	8.43E+0	1.46E-1	5.31E-1	9.10E+0	7.07E-2	7.84E-1	5.25E-3	-3.96E+0	6.00E+0
HTP-c	CTUh	1.76E-10	5.18E-12	2.83E-11	2.09E-10	2.51E-12	7.58E-11	1.28E-13	-8.58E-11	2.02E-10
HTP-nc	CTUh	4.23E-9	1.74E-10	5.87E-10	4.99E-9	8.42E-11	9.84E-10	3.02E-12	-2.09E-9	3.97E-9
SQP	Pt	7.32E+0	1.53E-1	6.13E-2	7.54E+0	7.45E-2	4.40E-1	1.34E-2	-1.07E+1	-2.68E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.30E+0	2.57E-3	1.16E+0	2.47E+0	1.25E-3	2.72E-2	2.09E-4	-1.88E+0	6.23E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.30E+0	2.57E-3	1.16E+0	2.47E+0	1.25E-3	2.72E-2	2.09E-4	-1.88E+0	6.23E-1
PENRE	MJ	1.86E+1	1.90E-1	3.67E-1	1.92E+1	9.24E-2	6.03E-1	5.55E-3	-9.44E+0	1.05E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.86E+1	1.90E-1	3.67E-1	1.92E+1	9.24E-2	6.03E-1	5.55E-3	-9.44E+0	1.05E+1
PET	MJ	2.00E+1	1.93E-1	1.53E+0	2.17E+1	9.36E-2	6.31E-1	5.76E-3	-1.13E+1	1.11E+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	6.05E-3	2.03E-5	2.83E-3	8.90E-3	9.85E-6	4.17E-4	6.46E-6	-3.47E-3	5.86E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.08E-6	4.58E-7	3.27E-7	4.87E-6	2.23E-7	1.00E-6	6.27E-9	-3.20E-6	2.90E-6
NHWD	kg	3.18E-2	1.11E-2	3.19E-3	4.61E-2	5.39E-3	2.89E-2	2.30E-2	-1.14E-2	9.20E-2
RWD	kg	1.81E-5	1.22E-6	3.49E-7	1.96E-5	5.92E-7	2.25E-6	3.42E-8	-6.29E-6	1.62E-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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