

Environmental Profile

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

Ecochain v3.5.64



Product: 3085671 - SiTech+ Pipe IJM STEM 90 L=0,25 S/PL
 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	8.16E-1	1.44E-2	5.12E-2	8.82E-1	1.07E-2	4.39E-1	5.14E-3	-4.99E-1	8.37E-1
GWP-f	kg CO2 eq	8.86E-1	1.44E-2	4.38E-2	9.44E-1	1.07E-2	3.50E-1	5.14E-3	-5.34E-1	7.76E-1
GWP-b	kg CO2 eq	-7.01E-2	8.76E-6	3.70E-3	-6.64E-2	6.52E-6	8.93E-2	4.50E-6	3.51E-2	5.80E-2
GWP-luluc	kg CO2 eq	4.77E-4	5.11E-6	3.70E-3	4.18E-3	3.80E-6	6.06E-5	8.66E-8	-3.87E-4	3.86E-3
ODP	kg CFC11 eq	2.88E-8	3.33E-9	4.40E-9	3.66E-8	2.47E-9	8.37E-9	1.29E-10	-2.38E-8	2.37E-8
AP	mol H+ eq	3.29E-3	8.22E-5	1.77E-4	3.55E-3	6.11E-5	3.50E-4	3.08E-6	-1.63E-3	2.34E-3
EP-fw	kg P eq	1.56E-5	1.19E-7	6.81E-7	1.64E-5	8.83E-8	1.76E-6	3.99E-9	-9.09E-6	9.19E-6
EP-m	kg N eq	5.85E-4	2.94E-5	2.99E-5	6.45E-4	2.19E-5	1.04E-4	2.16E-6	-3.04E-4	4.68E-4
EP-T	mol N eq	6.48E-3	3.24E-4	3.35E-4	7.14E-3	2.41E-4	1.14E-3	1.25E-5	-3.40E-3	5.13E-3
POCP	kg NMVOC eq	2.86E-3	9.27E-5	1.04E-4	3.06E-3	6.89E-5	3.59E-4	4.69E-6	-1.45E-3	2.05E-3
ADP-mm	kg Sb eq	2.66E-5	3.73E-7	1.07E-6	2.80E-5	2.78E-7	1.37E-6	3.09E-9	-4.18E-6	2.55E-5
ADP-f	MJ	3.07E+1	2.22E-1	5.77E-1	3.15E+1	1.65E-1	1.07E+0	9.42E-3	-1.62E+1	1.65E+1
WDP	m3 depriv.	6.04E-1	6.80E-4	2.04E-1	8.08E-1	5.06E-4	2.10E-2	4.31E-5	-3.24E-1	5.06E-1
PM	disease inc.	3.17E-8	1.30E-9	1.77E-9	3.48E-8	9.69E-10	5.67E-9	6.48E-11	-1.64E-8	2.51E-8
IR	kBq U-235 eq	2.01E-2	9.68E-4	5.38E-4	2.16E-2	7.20E-4	3.29E-3	4.38E-5	-1.01E-2	1.55E-2
ETP-fw	CTUe	9.67E+0	1.80E-1	9.10E-1	1.08E+1	1.34E-1	1.30E+0	8.33E-3	-5.01E+0	7.19E+0
HTP-c	CTUh	2.47E-10	6.40E-12	4.85E-11	3.02E-10	4.76E-12	1.44E-10	2.28E-13	-1.31E-10	3.20E-10
HTP-nc	CTUh	6.21E-9	2.14E-10	1.01E-9	7.43E-9	1.59E-10	1.81E-9	5.16E-12	-3.28E-9	6.13E-9
SQP	Pt	8.81E+0	1.90E-1	1.05E-1	9.11E+0	1.41E-1	8.47E-1	2.42E-2	-1.22E+1	-2.07E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.65E+0	3.18E-3	1.99E+0	3.65E+0	2.36E-3	5.22E-2	3.70E-4	-2.16E+0	1.54E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.65E+0	3.18E-3	1.99E+0	3.65E+0	2.36E-3	5.22E-2	3.70E-4	-2.16E+0	1.54E+0
PENRE	MJ	3.29E+1	2.35E-1	6.29E-1	3.38E+1	1.75E-1	1.14E+0	1.00E-2	-1.75E+1	1.76E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.29E+1	2.35E-1	6.29E-1	3.38E+1	1.75E-1	1.14E+0	1.00E-2	-1.75E+1	1.76E+1
PET	MJ	3.45E+1	2.38E-1	2.62E+0	3.74E+1	1.77E-1	1.20E+0	1.04E-2	-1.96E+1	1.92E+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	9.56E-3	2.51E-5	4.85E-3	1.44E-2	1.86E-5	6.61E-4	1.16E-5	-5.49E-3	9.64E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.05E-6	5.67E-7	5.60E-7	6.17E-6	4.21E-7	1.80E-6	1.13E-8	-4.74E-6	3.67E-6
NHWD	kg	4.28E-2	1.37E-2	5.46E-3	6.20E-2	1.02E-2	5.31E-2	4.15E-2	-1.78E-2	1.49E-1
RWD	kg	1.95E-5	1.51E-6	5.98E-7	2.16E-5	1.12E-6	4.19E-6	6.16E-8	-9.42E-6	1.76E-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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