

# Environmental Profile

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

Ecochain v3.5.64



Product: 3085670 - SiTech+ Pipe IJM STEM 90 L=0,15 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 non-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	5.68E-1	1.09E-2	3.54E-2	6.14E-1	7.42E-3	3.23E-1	3.57E-3	-3.47E-1	6.02E-1
GWP-f	kg CO2 eq	6.24E-1	1.09E-2	3.03E-2	6.66E-1	7.41E-3	2.53E-1	3.57E-3	-3.74E-1	5.55E-1
GWP-b	kg CO2 eq	-5.67E-2	6.62E-6	2.56E-3	-5.41E-2	4.50E-6	7.09E-2	3.14E-6	2.70E-2	4.38E-2
GWP-luluc	kg CO2 eq	3.58E-4	3.86E-6	2.56E-3	2.92E-3	2.62E-6	4.17E-5	6.03E-8	-2.90E-4	2.68E-3
ODP	kg CFC11 eq	2.34E-8	2.51E-9	3.04E-9	2.90E-8	1.71E-9	5.82E-9	8.99E-11	-1.73E-8	1.93E-8
AP	mol H+ eq	2.35E-3	6.21E-5	1.22E-4	2.54E-3	4.22E-5	2.44E-4	2.14E-6	-1.14E-3	1.68E-3
EP-fw	kg P eq	1.14E-5	8.97E-8	4.71E-7	1.20E-5	6.10E-8	1.21E-6	2.78E-9	-6.56E-6	6.68E-6
EP-m	kg N eq	4.20E-4	2.22E-5	2.07E-5	4.63E-4	1.51E-5	7.27E-5	1.55E-6	-2.15E-4	3.37E-4
EP-T	mol N eq	4.65E-3	2.45E-4	2.32E-4	5.13E-3	1.67E-4	8.00E-4	8.71E-6	-2.41E-3	3.69E-3
POCP	kg NMVOC eq	2.04E-3	7.00E-5	7.21E-5	2.19E-3	4.76E-5	2.50E-4	3.26E-6	-1.01E-3	1.47E-3
ADP-mm	kg Sb eq	2.33E-5	2.82E-7	7.39E-7	2.43E-5	1.92E-7	9.51E-7	2.15E-9	-3.07E-6	2.24E-5
ADP-f	MJ	2.14E+1	1.67E-1	3.99E-1	2.20E+1	1.14E-1	7.41E-1	6.56E-3	-1.12E+1	1.16E+1
WDP	m3 depriv.	4.23E-1	5.14E-4	1.41E-1	5.65E-1	3.49E-4	1.45E-2	3.01E-5	-2.27E-1	3.53E-1
PM	disease inc.	2.30E-8	9.84E-10	1.23E-9	2.53E-8	6.69E-10	3.92E-9	4.51E-11	-1.17E-8	1.82E-8
IR	kBq U-235 eq	1.51E-2	7.32E-4	3.72E-4	1.62E-2	4.97E-4	2.27E-3	3.06E-5	-7.22E-3	1.18E-2
ETP-fw	CTUe	7.31E+0	1.36E-1	6.30E-1	8.08E+0	9.24E-2	9.15E-1	5.93E-3	-3.71E+0	5.39E+0
HTP-c	CTUh	1.81E-10	4.84E-12	3.36E-11	2.20E-10	3.29E-12	9.94E-11	1.59E-13	-9.49E-11	2.28E-10
HTP-nc	CTUh	4.49E-9	1.62E-10	6.97E-10	5.35E-9	1.10E-10	1.26E-9	3.63E-12	-2.34E-9	4.38E-9
SQP	Pt	6.94E+0	1.43E-1	7.27E-2	7.16E+0	9.74E-2	5.83E-1	1.68E-2	-9.48E+0	-1.63E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.27E+0	2.40E-3	1.38E+0	2.65E+0	1.63E-3	3.60E-2	2.58E-4	-1.67E+0	1.02E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.27E+0	2.40E-3	1.38E+0	2.65E+0	1.63E-3	3.60E-2	2.58E-4	-1.67E+0	1.02E+0
PENRE	MJ	2.30E+1	1.78E-1	4.35E-1	2.36E+1	1.21E-1	7.89E-1	6.96E-3	-1.21E+1	1.24E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.30E+1	1.78E-1	4.35E-1	2.36E+1	1.21E-1	7.89E-1	6.96E-3	-1.21E+1	1.24E+1
PET	MJ	2.43E+1	1.80E-1	1.82E+0	2.63E+1	1.22E-1	8.25E-1	7.22E-3	-1.38E+1	1.34E+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	6.81E-3	1.89E-5	3.35E-3	1.02E-2	1.29E-5	4.71E-4	8.11E-6	-3.89E-3	6.79E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.79E-6	4.28E-7	3.88E-7	4.61E-6	2.91E-7	1.26E-6	7.88E-9	-3.43E-6	2.73E-6
NHWD	kg	3.15E-2	1.04E-2	3.78E-3	4.57E-2	7.05E-3	3.68E-2	2.89E-2	-1.28E-2	1.06E-1
RWD	kg	1.51E-5	1.14E-6	4.14E-7	1.67E-5	7.74E-7	2.90E-6	4.29E-8	-6.78E-6	1.36E-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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