

# Environmental Profile

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

Ecochain v3.5.64



Product: 3067768 - SiTech+ Branch STEA 67,5° 90X90  
 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	8.32E-1	1.77E-2	5.85E-2	9.08E-1	1.07E-2	5.11E-1	5.18E-3	-4.98E-1	9.37E-1
GWP-f	kg CO2 eq	9.31E-1	1.77E-2	5.01E-2	9.99E-1	1.07E-2	3.84E-1	5.19E-3	-5.53E-1	8.46E-1
GWP-b	kg CO2 eq	-1.00E-1	1.08E-5	4.23E-3	-9.59E-2	6.48E-6	1.27E-1	4.57E-6	5.48E-2	8.62E-2
GWP-luluc	kg CO2 eq	6.31E-4	6.27E-6	4.23E-3	4.87E-3	3.78E-6	6.00E-5	8.78E-8	-5.36E-4	4.39E-3
ODP	kg CFC11 eq	4.14E-8	4.08E-9	5.03E-9	5.05E-8	2.46E-9	8.59E-9	1.31E-10	-2.72E-8	3.45E-8
AP	mol H+ eq	3.59E-3	1.01E-4	2.02E-4	3.90E-3	6.08E-5	3.59E-4	3.12E-6	-1.73E-3	2.59E-3
EP-fw	kg P eq	1.82E-5	1.46E-7	7.78E-7	1.91E-5	8.78E-8	1.76E-6	4.05E-9	-1.09E-5	1.01E-5
EP-m	kg N eq	6.53E-4	3.61E-5	3.41E-5	7.24E-4	2.17E-5	1.08E-4	2.33E-6	-3.31E-4	5.25E-4
EP-T	mol N eq	7.21E-3	3.98E-4	3.83E-4	7.99E-3	2.40E-4	1.19E-3	1.27E-5	-3.72E-3	5.71E-3
POCP	kg NMVOC eq	3.10E-3	1.14E-4	1.19E-4	3.33E-3	6.85E-5	3.70E-4	4.74E-6	-1.52E-3	2.25E-3
ADP-mm	kg Sb eq	4.31E-5	4.58E-7	1.22E-6	4.48E-5	2.76E-7	1.39E-6	3.13E-9	-4.82E-6	4.16E-5
ADP-f	MJ	3.15E+1	2.72E-1	6.59E-1	3.24E+1	1.64E-1	1.08E+0	9.54E-3	-1.64E+1	1.73E+1
WDP	m3 depriv.	6.24E-1	8.34E-4	2.33E-1	8.58E-1	5.03E-4	2.11E-2	4.37E-5	-3.47E-1	5.32E-1
PM	disease inc.	3.62E-8	1.60E-9	2.02E-9	3.98E-8	9.63E-10	5.73E-9	6.55E-11	-1.86E-8	2.80E-8
IR	kBq U-235 eq	2.45E-2	1.19E-3	6.15E-4	2.63E-2	7.16E-4	3.32E-3	4.44E-5	-1.15E-2	1.88E-2
ETP-fw	CTUe	1.30E+1	2.21E-1	1.04E+0	1.43E+1	1.33E-1	1.37E+0	8.86E-3	-6.61E+0	9.22E+0
HTP-c	CTUh	2.90E-10	7.85E-12	5.54E-11	3.53E-10	4.73E-12	1.44E-10	2.31E-13	-1.52E-10	3.50E-10
HTP-nc	CTUh	7.03E-9	2.63E-10	1.15E-9	8.44E-9	1.59E-10	1.84E-9	5.34E-12	-3.73E-9	6.71E-9
SQP	Pt	1.23E+1	2.33E-1	1.20E-1	1.27E+1	1.40E-1	8.42E-1	2.45E-2	-1.78E+1	-4.10E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.20E+0	3.90E-3	2.28E+0	4.49E+0	2.35E-3	5.19E-2	3.77E-4	-3.11E+0	1.44E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.20E+0	3.90E-3	2.28E+0	4.49E+0	2.35E-3	5.19E-2	3.77E-4	-3.11E+0	1.44E+0
PENRE	MJ	3.38E+1	2.89E-1	7.19E-1	3.48E+1	1.74E-1	1.15E+0	1.01E-2	-1.76E+1	1.85E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.38E+1	2.89E-1	7.19E-1	3.48E+1	1.74E-1	1.15E+0	1.01E-2	-1.76E+1	1.85E+1
PET	MJ	3.60E+1	2.92E-1	3.00E+0	3.93E+1	1.76E-1	1.20E+0	1.05E-2	-2.07E+1	1.99E+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	1.03E-2	3.08E-5	5.54E-3	1.59E-2	1.85E-5	7.07E-4	1.18E-5	-6.19E-3	1.04E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.32E-6	6.95E-7	6.40E-7	7.65E-6	4.19E-7	1.85E-6	1.15E-8	-5.38E-6	4.56E-6
NHWD	kg	5.17E-2	1.68E-2	6.24E-3	7.48E-2	1.02E-2	5.38E-2	4.20E-2	-2.04E-2	1.60E-1
RWD	kg	2.53E-5	1.85E-6	6.84E-7	2.78E-5	1.11E-6	4.25E-6	6.24E-8	-1.09E-5	2.23E-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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