

# Environmental Profile

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

Ecochain v3.5.64



Product: 3067751 - SiTech+ Branch STEA 45° 50X50  
 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	2.88E-1	6.40E-3	1.89E-2	3.14E-1	3.53E-3	1.75E-1	1.74E-3	-1.65E-1	3.29E-1
GWP-f	kg CO2 eq	3.17E-1	6.39E-3	1.62E-2	3.39E-1	3.53E-3	1.37E-1	1.74E-3	-1.86E-1	2.96E-1
GWP-b	kg CO2 eq	-2.87E-2	3.88E-6	1.37E-3	-2.73E-2	2.14E-6	3.85E-2	1.54E-6	2.05E-2	3.17E-2
GWP-luluc	kg CO2 eq	2.27E-4	2.26E-6	1.37E-3	1.60E-3	1.25E-6	1.97E-5	2.95E-8	-1.91E-4	1.43E-3
ODP	kg CFC11 eq	1.65E-8	1.47E-9	1.62E-9	1.96E-8	8.14E-10	2.86E-9	4.39E-11	-9.51E-9	1.38E-8
AP	mol H+ eq	1.25E-3	3.64E-5	6.53E-5	1.35E-3	2.01E-5	1.20E-4	1.05E-6	-5.77E-4	9.13E-4
EP-fw	kg P eq	6.46E-6	5.26E-8	2.51E-7	6.77E-6	2.91E-8	5.78E-7	1.36E-9	-3.77E-6	3.61E-6
EP-m	kg N eq	2.27E-4	1.30E-5	1.10E-5	2.51E-4	7.20E-6	3.63E-5	8.21E-7	-1.11E-4	1.84E-4
EP-T	mol N eq	2.50E-3	1.44E-4	1.24E-4	2.76E-3	7.93E-5	3.99E-4	4.25E-6	-1.25E-3	2.00E-3
POCP	kg NMVOC eq	1.07E-3	4.10E-5	3.85E-5	1.15E-3	2.27E-5	1.24E-4	1.59E-6	-5.05E-4	7.91E-4
ADP-mm	kg Sb eq	1.85E-5	1.65E-7	3.94E-7	1.91E-5	9.14E-8	4.62E-7	1.05E-9	-1.73E-6	1.79E-5
ADP-f	MJ	1.06E+1	9.81E-2	2.13E-1	1.09E+1	5.42E-2	3.55E-1	3.20E-3	-5.42E+0	5.90E+0
WDP	m3 depriv.	2.11E-1	3.01E-4	7.53E-2	2.87E-1	1.66E-4	7.05E-3	1.47E-5	-1.17E-1	1.77E-1
PM	disease inc.	1.27E-8	5.77E-10	6.54E-10	1.40E-8	3.19E-10	1.90E-9	2.20E-11	-6.26E-9	9.93E-9
IR	kBq U-235 eq	9.07E-3	4.29E-4	1.99E-4	9.70E-3	2.37E-4	1.10E-3	1.49E-5	-3.94E-3	7.11E-3
ETP-fw	CTUe	4.82E+0	7.97E-2	3.36E-1	5.23E+0	4.40E-2	4.71E-1	3.09E-3	-2.35E+0	3.40E+0
HTP-c	CTUh	9.99E-11	2.84E-12	1.79E-11	1.21E-10	1.57E-12	4.75E-11	7.79E-14	-5.01E-11	1.20E-10
HTP-nc	CTUh	2.46E-9	9.50E-11	3.72E-10	2.93E-9	5.25E-11	6.11E-10	1.82E-12	-1.26E-9	2.33E-9
SQP	Pt	3.84E+0	8.39E-2	3.88E-2	3.96E+0	4.64E-2	2.77E-1	8.22E-3	-5.97E+0	-1.68E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.03E-1	1.41E-3	7.37E-1	1.44E+0	7.78E-4	1.71E-2	1.27E-4	-1.05E+0	4.04E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.03E-1	1.41E-3	7.37E-1	1.44E+0	7.78E-4	1.71E-2	1.27E-4	-1.05E+0	4.04E-1
PENRE	MJ	1.14E+1	1.04E-1	2.32E-1	1.17E+1	5.76E-2	3.78E-1	3.40E-3	-5.85E+0	6.30E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.14E+1	1.04E-1	2.32E-1	1.17E+1	5.76E-2	3.78E-1	3.40E-3	-5.85E+0	6.30E+0
PET	MJ	1.21E+1	1.06E-1	9.69E-1	1.31E+1	5.83E-2	3.95E-1	3.53E-3	-6.90E+0	6.70E+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	3.58E-3	1.11E-5	1.79E-3	5.38E-3	6.14E-6	2.46E-4	3.96E-6	-2.12E-3	3.52E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.27E-6	2.51E-7	2.07E-7	2.73E-6	1.39E-7	6.20E-7	3.85E-9	-1.86E-6	1.64E-6
NHWD	kg	1.82E-2	6.08E-3	2.02E-3	2.63E-2	3.36E-3	1.79E-2	1.41E-2	-6.74E-3	5.49E-2
RWD	kg	9.69E-6	6.67E-7	2.21E-7	1.06E-5	3.69E-7	1.41E-6	2.10E-8	-3.75E-6	8.62E-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



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