

# Environmental Profile

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

Ecochain v3.5.64



Product: 3067833 - SiTech+ Branch STEA 87,5° 90X90 Swept  
 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	8.94E-1	1.85E-2	6.30E-2	9.75E-1	1.15E-2	5.35E-1	5.57E-3	-5.36E-1	9.91E-1
GWP-f	kg CO2 eq	9.93E-1	1.85E-2	5.39E-2	1.07E+0	1.15E-2	4.08E-1	5.57E-3	-5.91E-1	9.00E-1
GWP-b	kg CO2 eq	-9.98E-2	1.12E-5	4.56E-3	-9.53E-2	6.98E-6	1.27E-1	4.90E-6	5.46E-2	8.66E-2
GWP-luluc	kg CO2 eq	6.46E-4	6.54E-6	4.55E-3	5.21E-3	4.07E-6	6.46E-5	9.43E-8	-5.44E-4	4.73E-3
ODP	kg CFC11 eq	4.24E-8	4.26E-9	5.41E-9	5.21E-8	2.65E-9	9.18E-9	1.40E-10	-2.86E-8	3.55E-8
AP	mol H+ eq	3.81E-3	1.05E-4	2.18E-4	4.13E-3	6.54E-5	3.84E-4	3.35E-6	-1.83E-3	2.75E-3
EP-fw	kg P eq	1.91E-5	1.52E-7	8.38E-7	2.01E-5	9.45E-8	1.89E-6	4.34E-9	-1.13E-5	1.08E-5
EP-m	kg N eq	6.89E-4	3.77E-5	3.67E-5	7.64E-4	2.34E-5	1.15E-4	2.48E-6	-3.50E-4	5.55E-4
EP-T	mol N eq	7.61E-3	4.15E-4	4.13E-4	8.44E-3	2.58E-4	1.27E-3	1.36E-5	-3.92E-3	6.06E-3
POCP	kg NMVOC eq	3.29E-3	1.19E-4	1.28E-4	3.54E-3	7.38E-5	3.96E-4	5.09E-6	-1.62E-3	2.39E-3
ADP-mm	kg Sb eq	4.39E-5	4.78E-7	1.31E-6	4.57E-5	2.97E-7	1.49E-6	3.36E-9	-5.07E-6	4.24E-5
ADP-f	MJ	3.37E+1	2.84E-1	7.10E-1	3.47E+1	1.76E-1	1.16E+0	1.02E-2	-1.76E+1	1.85E+1
WDP	m3 depriv.	6.67E-1	8.70E-4	2.51E-1	9.19E-1	5.41E-4	2.27E-2	4.69E-5	-3.68E-1	5.75E-1
PM	disease inc.	3.81E-8	1.67E-9	2.18E-9	4.19E-8	1.04E-9	6.15E-9	7.04E-11	-1.95E-8	2.97E-8
IR	kBq U-235 eq	2.56E-2	1.24E-3	6.62E-4	2.75E-2	7.71E-4	3.56E-3	4.77E-5	-1.21E-2	1.98E-2
ETP-fw	CTUe	1.34E+1	2.30E-1	1.12E+0	1.47E+1	1.43E-1	1.46E+0	9.45E-3	-6.75E+0	9.57E+0
HTP-c	CTUh	3.03E-10	8.19E-12	5.97E-11	3.71E-10	5.10E-12	1.55E-10	2.48E-13	-1.59E-10	3.73E-10
HTP-nc	CTUh	7.41E-9	2.74E-10	1.24E-9	8.93E-9	1.71E-10	1.97E-9	5.71E-12	-3.91E-9	7.16E-9
SQP	Pt	1.24E+1	2.43E-1	1.29E-1	1.28E+1	1.51E-1	9.06E-1	2.63E-2	-1.78E+1	-3.96E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.24E+0	4.07E-3	2.46E+0	4.70E+0	2.53E-3	5.58E-2	4.04E-4	-3.12E+0	1.63E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.24E+0	4.07E-3	2.46E+0	4.70E+0	2.53E-3	5.58E-2	4.04E-4	-3.12E+0	1.63E+0
PENRE	MJ	3.62E+1	3.01E-1	7.74E-1	3.72E+1	1.87E-1	1.23E+0	1.09E-2	-1.89E+1	1.97E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.62E+1	3.01E-1	7.74E-1	3.72E+1	1.87E-1	1.23E+0	1.09E-2	-1.89E+1	1.97E+1
PET	MJ	3.84E+1	3.05E-1	3.23E+0	4.19E+1	1.90E-1	1.29E+0	1.13E-2	-2.20E+1	2.14E+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	1.10E-2	3.21E-5	5.97E-3	1.70E-2	2.00E-5	7.53E-4	1.27E-5	-6.50E-3	1.13E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.57E-6	7.25E-7	6.90E-7	7.99E-6	4.51E-7	1.98E-6	1.23E-8	-5.66E-6	4.77E-6
NHWD	kg	5.40E-2	1.76E-2	6.72E-3	7.83E-2	1.09E-2	5.77E-2	4.51E-2	-2.13E-2	1.71E-1
RWD	kg	2.62E-5	1.93E-6	7.36E-7	2.89E-5	1.20E-6	4.56E-6	6.70E-8	-1.14E-5	2.33E-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



Ecochain Technologies BV  
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands  
<https://www.ecochain.com>  
+31 20 3035 777