

# Environmental Profile

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

Ecochain v3.5.64



Product: 3067741 - SiTech+ Bend STB 87,5° 50  
 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	1.52E-1	3.66E-3	1.08E-2	1.67E-1	2.02E-3	1.10E-1	9.86E-4	-9.55E-2	1.85E-1
GWP-f	kg CO2 eq	1.81E-1	3.65E-3	9.25E-3	1.94E-1	2.02E-3	7.58E-2	9.86E-4	-1.07E-1	1.66E-1
GWP-b	kg CO2 eq	-2.89E-2	2.22E-6	7.81E-4	-2.82E-2	1.22E-6	3.46E-2	8.71E-7	1.17E-2	1.82E-2
GWP-luluc	kg CO2 eq	1.35E-4	1.29E-6	7.81E-4	9.17E-4	7.14E-7	1.13E-5	1.67E-8	-1.16E-4	8.13E-4
ODP	kg CFC11 eq	9.03E-9	8.42E-10	9.28E-10	1.08E-8	4.65E-10	1.65E-9	2.49E-11	-5.53E-9	7.42E-9
AP	mol H+ eq	7.12E-4	2.08E-5	3.73E-5	7.70E-4	1.15E-5	6.90E-5	5.95E-7	-3.41E-4	5.10E-4
EP-fw	kg P eq	3.70E-6	3.01E-8	1.44E-7	3.88E-6	1.66E-8	3.32E-7	7.71E-10	-2.24E-6	1.99E-6
EP-m	kg N eq	1.31E-4	7.45E-6	6.30E-6	1.45E-4	4.11E-6	2.09E-5	4.57E-7	-6.64E-5	1.04E-4
EP-T	mol N eq	1.44E-3	8.21E-5	7.08E-5	1.60E-3	4.53E-5	2.30E-4	2.41E-6	-7.47E-4	1.13E-3
POCP	kg NMVOC eq	6.15E-4	2.35E-5	2.20E-5	6.61E-4	1.29E-5	7.13E-5	9.03E-7	-3.02E-4	4.44E-4
ADP-mm	kg Sb eq	9.58E-6	9.45E-8	2.25E-7	9.90E-6	5.22E-8	2.66E-7	5.96E-10	-9.85E-7	9.23E-6
ADP-f	MJ	6.05E+0	5.61E-2	1.22E-1	6.22E+0	3.09E-2	2.04E-1	1.82E-3	-3.12E+0	3.34E+0
WDP	m3 depriv.	1.20E-1	1.72E-4	4.30E-2	1.63E-1	9.50E-5	4.02E-3	8.33E-6	-6.76E-2	9.99E-2
PM	disease inc.	7.37E-9	3.30E-10	3.73E-10	8.07E-9	1.82E-10	1.09E-9	1.25E-11	-3.81E-9	5.55E-9
IR	kBq U-235 eq	5.05E-3	2.45E-4	1.14E-4	5.41E-3	1.35E-4	6.34E-4	8.47E-6	-2.33E-3	3.86E-3
ETP-fw	CTUe	2.75E+0	4.55E-2	1.92E-1	2.98E+0	2.51E-2	2.67E-1	1.73E-3	-1.39E+0	1.89E+0
HTP-c	CTUh	6.13E-11	1.62E-12	1.02E-11	7.32E-11	8.94E-13	2.75E-11	4.42E-14	-3.32E-11	6.84E-11
HTP-nc	CTUh	1.42E-9	5.43E-11	2.12E-10	1.68E-9	3.00E-11	3.50E-10	1.03E-12	-7.60E-10	1.31E-9
SQP	Pt	3.23E+0	4.80E-2	2.22E-2	3.30E+0	2.65E-2	1.59E-1	4.66E-3	-4.30E+0	-8.09E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.52E-1	8.05E-4	4.21E-1	9.74E-1	4.44E-4	9.82E-3	7.20E-5	-7.36E-1	2.48E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.52E-1	8.05E-4	4.21E-1	9.74E-1	4.44E-4	9.82E-3	7.20E-5	-7.36E-1	2.48E-1
PENRE	MJ	6.48E+0	5.95E-2	1.33E-1	6.68E+0	3.29E-2	2.18E-1	1.93E-3	-3.37E+0	3.56E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.48E+0	5.95E-2	1.33E-1	6.68E+0	3.29E-2	2.18E-1	1.93E-3	-3.37E+0	3.56E+0
PET	MJ	7.04E+0	6.03E-2	5.54E-1	7.65E+0	3.33E-2	2.27E-1	2.00E-3	-4.10E+0	3.81E+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	2.03E-3	6.35E-6	1.02E-3	3.06E-3	3.50E-6	1.38E-4	2.25E-6	-1.23E-3	1.97E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.34E-6	1.43E-7	1.18E-7	1.60E-6	7.91E-8	3.56E-7	2.18E-9	-1.11E-6	9.27E-7
NHWD	kg	1.08E-2	3.48E-3	1.15E-3	1.54E-2	1.92E-3	1.03E-2	8.01E-3	-4.34E-3	3.12E-2
RWD	kg	5.34E-6	3.81E-7	1.26E-7	5.85E-6	2.10E-7	8.13E-7	1.19E-8	-2.23E-6	4.66E-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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