

# Environmental Profile

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

Ecochain v3.5.64



Product: 3067735 - SiTech+ Bend STB 67,5° 75  
 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	3.44E-1	5.29E-3	2.51E-2	3.75E-1	4.53E-3	2.09E-1	2.19E-3	-2.12E-1	3.79E-1
GWP-f	kg CO2 eq	3.87E-1	5.29E-3	2.14E-2	4.14E-1	4.53E-3	1.56E-1	2.19E-3	-2.31E-1	3.46E-1
GWP-b	kg CO2 eq	-4.28E-2	3.21E-6	1.81E-3	-4.10E-2	2.75E-6	5.27E-2	1.92E-6	1.93E-2	3.10E-2
GWP-luluc	kg CO2 eq	2.41E-4	1.87E-6	1.81E-3	2.05E-3	1.60E-6	2.55E-5	3.70E-8	-2.01E-4	1.88E-3
ODP	kg CFC11 eq	1.54E-8	1.22E-9	2.15E-9	1.87E-8	1.04E-9	3.60E-9	5.51E-11	-1.10E-8	1.25E-8
AP	mol H+ eq	1.47E-3	3.01E-5	8.65E-5	1.59E-3	2.58E-5	1.51E-4	1.31E-6	-7.17E-4	1.05E-3
EP-fw	kg P eq	7.28E-6	4.35E-8	3.33E-7	7.65E-6	3.73E-8	7.45E-7	1.70E-9	-4.29E-6	4.14E-6
EP-m	kg N eq	2.66E-4	1.08E-5	1.46E-5	2.91E-4	9.23E-6	4.51E-5	9.57E-7	-1.36E-4	2.10E-4
EP-T	mol N eq	2.94E-3	1.19E-4	1.64E-4	3.22E-3	1.02E-4	4.96E-4	5.34E-6	-1.53E-3	2.29E-3
POCP	kg NMVOC eq	1.28E-3	3.39E-5	5.10E-5	1.36E-3	2.91E-5	1.55E-4	2.00E-6	-6.36E-4	9.12E-4
ADP-mm	kg Sb eq	1.54E-5	1.37E-7	5.22E-7	1.61E-5	1.17E-7	5.87E-7	1.32E-9	-1.94E-6	1.48E-5
ADP-f	MJ	1.32E+1	8.12E-2	2.82E-1	1.36E+1	6.95E-2	4.55E-1	4.02E-3	-6.91E+0	7.18E+0
WDP	m3 depriv.	2.61E-1	2.49E-4	9.98E-2	3.61E-1	2.13E-4	8.92E-3	1.84E-5	-1.43E-1	2.27E-1
PM	disease inc.	1.46E-8	4.77E-10	8.66E-10	1.60E-8	4.09E-10	2.42E-9	2.76E-11	-7.54E-9	1.13E-8
IR	kBq U-235 eq	9.60E-3	3.55E-4	2.63E-4	1.02E-2	3.04E-4	1.40E-3	1.87E-5	-4.64E-3	7.31E-3
ETP-fw	CTUe	4.90E+0	6.59E-2	4.45E-1	5.41E+0	5.65E-2	5.67E-1	3.66E-3	-2.51E+0	3.53E+0
HTP-c	CTUh	1.18E-10	2.34E-12	2.37E-11	1.44E-10	2.01E-12	6.12E-11	9.74E-14	-6.25E-11	1.45E-10
HTP-nc	CTUh	2.85E-9	7.86E-11	4.92E-10	3.42E-9	6.73E-11	7.74E-10	2.23E-12	-1.51E-9	2.76E-9
SQP	Pt	5.06E+0	6.94E-2	5.14E-2	5.18E+0	5.95E-2	3.58E-1	1.03E-2	-6.87E+0	-1.26E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.01E-1	1.16E-3	9.76E-1	1.88E+0	9.98E-4	2.20E-2	1.58E-4	-1.20E+0	7.06E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.01E-1	1.16E-3	9.76E-1	1.88E+0	9.98E-4	2.20E-2	1.58E-4	-1.20E+0	7.06E-1
PENRE	MJ	1.42E+1	8.62E-2	3.08E-1	1.46E+1	7.38E-2	4.85E-1	4.26E-3	-7.45E+0	7.67E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.42E+1	8.62E-2	3.08E-1	1.46E+1	7.38E-2	4.85E-1	4.26E-3	-7.45E+0	7.67E+0
PET	MJ	1.51E+1	8.73E-2	1.28E+0	1.64E+1	7.48E-2	5.07E-1	4.42E-3	-8.64E+0	8.37E+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	4.24E-3	9.18E-6	2.37E-3	6.62E-3	7.87E-6	2.91E-4	4.97E-6	-2.49E-3	4.44E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.50E-6	2.08E-7	2.74E-7	2.98E-6	1.78E-7	7.77E-7	4.83E-9	-2.19E-6	1.75E-6
NHWD	kg	2.07E-2	5.03E-3	2.67E-3	2.84E-2	4.31E-3	2.27E-2	1.77E-2	-8.37E-3	6.47E-2
RWD	kg	9.72E-6	5.52E-7	2.93E-7	1.06E-5	4.73E-7	1.79E-6	2.63E-8	-4.37E-6	8.48E-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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