

# Environmental Profile

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

Ecochain v3.5.64



Product: 3067838 - SiTech+ Double Branch 87,5° 110X110x110  
 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	1.81E+0	3.74E-2	1.30E-1	1.98E+0	2.36E-2	1.14E+0	1.14E-2	-1.09E+0	2.06E+0
GWP-f	kg CO2 eq	2.05E+0	3.73E-2	1.11E-1	2.20E+0	2.36E-2	8.28E-1	1.14E-2	-1.23E+0	1.84E+0
GWP-b	kg CO2 eq	-2.43E-1	2.27E-5	9.38E-3	-2.34E-1	1.43E-5	3.09E-1	1.00E-5	1.34E-1	2.09E-1
GWP-luluc	kg CO2 eq	1.46E-3	1.32E-5	9.38E-3	1.08E-2	8.34E-6	1.33E-4	1.93E-7	-1.28E-3	9.71E-3
ODP	kg CFC11 eq	8.74E-8	8.61E-9	1.11E-8	1.07E-7	5.43E-9	1.92E-8	2.87E-10	-6.03E-8	7.18E-8
AP	mol H+ eq	7.91E-3	2.13E-4	4.48E-4	8.57E-3	1.34E-4	8.00E-4	6.85E-6	-3.90E-3	5.61E-3
EP-fw	kg P eq	4.04E-5	3.07E-7	1.73E-6	4.25E-5	1.94E-7	3.90E-6	8.88E-9	-2.53E-5	2.13E-5
EP-m	kg N eq	1.45E-3	7.61E-5	7.57E-5	1.60E-3	4.80E-5	2.41E-4	5.04E-6	-7.51E-4	1.15E-3
EP-T	mol N eq	1.60E-2	8.39E-4	8.50E-4	1.77E-2	5.29E-4	2.65E-3	2.78E-5	-8.43E-3	1.24E-2
POCP	kg NMVOC eq	6.83E-3	2.40E-4	2.64E-4	7.33E-3	1.51E-4	8.26E-4	1.04E-5	-3.43E-3	4.89E-3
ADP-mm	kg Sb eq	8.57E-5	9.66E-7	2.70E-6	8.94E-5	6.10E-7	3.12E-6	6.87E-9	-1.05E-5	8.26E-5
ADP-f	MJ	6.93E+1	5.73E-1	1.46E+0	7.14E+1	3.62E-1	2.40E+0	2.10E-2	-3.63E+1	3.79E+1
WDP	m3 depriv.	1.37E+0	1.76E-3	5.17E-1	1.89E+0	1.11E-3	4.67E-2	9.60E-5	-7.88E-1	1.15E+0
PM	disease inc.	7.99E-8	3.37E-9	4.49E-9	8.77E-8	2.13E-9	1.28E-8	1.44E-10	-4.27E-8	6.01E-8
IR	kBq U-235 eq	5.26E-2	2.51E-3	1.36E-3	5.65E-2	1.58E-3	7.42E-3	9.76E-5	-2.63E-2	3.93E-2
ETP-fw	CTUe	3.00E+1	4.65E-1	2.31E+0	3.27E+1	2.94E-1	3.03E+0	1.92E-2	-1.56E+1	2.05E+1
HTP-c	CTUh	6.44E-10	1.66E-11	1.23E-10	7.84E-10	1.05E-11	3.22E-10	5.08E-13	-3.52E-10	7.65E-10
HTP-nc	CTUh	1.55E-8	5.55E-10	2.55E-9	1.86E-8	3.50E-10	4.08E-9	1.17E-11	-8.56E-9	1.45E-8
SQP	Pt	2.94E+1	4.90E-1	2.66E-1	3.02E+1	3.09E-1	1.88E+0	5.38E-2	-4.31E+1	-1.07E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.22E+0	8.22E-3	5.06E+0	1.03E+1	5.19E-3	1.15E-1	8.27E-4	-7.51E+0	2.90E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.22E+0	8.22E-3	5.06E+0	1.03E+1	5.19E-3	1.15E-1	8.27E-4	-7.51E+0	2.90E+0
PENRE	MJ	7.44E+1	6.09E-1	1.59E+0	7.66E+1	3.84E-1	2.55E+0	2.22E-2	-3.91E+1	4.04E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.44E+1	6.09E-1	1.59E+0	7.66E+1	3.84E-1	2.55E+0	2.22E-2	-3.91E+1	4.04E+1
PET	MJ	7.96E+1	6.17E-1	6.65E+0	8.69E+1	3.89E-1	2.67E+0	2.31E-2	-4.66E+1	4.33E+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	2.27E-2	6.49E-5	1.23E-2	3.50E-2	4.09E-5	1.54E-3	2.59E-5	-1.42E-2	2.24E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.39E-5	1.47E-6	1.42E-6	1.68E-5	9.25E-7	4.13E-6	2.52E-8	-1.20E-5	9.90E-6
NHWD	kg	1.15E-1	3.55E-2	1.38E-2	1.65E-1	2.24E-2	1.19E-1	9.24E-2	-4.69E-2	3.52E-1
RWD	kg	5.37E-5	3.90E-6	1.52E-6	5.92E-5	2.46E-6	9.51E-6	1.37E-7	-2.49E-5	4.64E-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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