

Environmental Profile

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

Ecochain v3.5.64



Product: 3067743 - SiTech+ Bend STB 87,5° 90
 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	5.62E-1	1.08E-2	4.05E-2	6.14E-1	7.34E-3	3.21E-1	3.54E-3	-3.43E-1	6.03E-1
GWP-f	kg CO2 eq	6.19E-1	1.08E-2	3.47E-2	6.64E-1	7.34E-3	2.50E-1	3.54E-3	-3.70E-1	5.55E-1
GWP-b	kg CO2 eq	-5.67E-2	6.58E-6	2.93E-3	-5.38E-2	4.45E-6	7.09E-2	3.11E-6	2.71E-2	4.42E-2
GWP-luluc	kg CO2 eq	3.57E-4	3.83E-6	2.93E-3	3.29E-3	2.60E-6	4.13E-5	5.97E-8	-2.90E-4	3.04E-3
ODP	kg CFC11 eq	2.34E-8	2.50E-9	3.48E-9	2.93E-8	1.69E-9	5.76E-9	8.90E-11	-1.71E-8	1.97E-8
AP	mol H+ eq	2.34E-3	6.17E-5	1.40E-4	2.54E-3	4.18E-5	2.41E-4	2.12E-6	-1.13E-3	1.69E-3
EP-fw	kg P eq	1.13E-5	8.91E-8	5.39E-7	1.20E-5	6.04E-8	1.20E-6	2.75E-9	-6.51E-6	6.71E-6
EP-m	kg N eq	4.17E-4	2.21E-5	2.36E-5	4.63E-4	1.50E-5	7.20E-5	1.53E-6	-2.13E-4	3.38E-4
EP-T	mol N eq	4.63E-3	2.43E-4	2.65E-4	5.13E-3	1.65E-4	7.92E-4	8.62E-6	-2.39E-3	3.71E-3
POCP	kg NMVOC eq	2.03E-3	6.95E-5	8.25E-5	2.18E-3	4.71E-5	2.48E-4	3.23E-6	-1.00E-3	1.47E-3
ADP-mm	kg Sb eq	2.36E-5	2.80E-7	8.44E-7	2.47E-5	1.90E-7	9.41E-7	2.13E-9	-3.04E-6	2.28E-5
ADP-f	MJ	2.12E+1	1.66E-1	4.56E-1	2.19E+1	1.13E-1	7.33E-1	6.49E-3	-1.11E+1	1.16E+1
WDP	m3 depriv.	4.19E-1	5.10E-4	1.61E-1	5.81E-1	3.46E-4	1.44E-2	2.97E-5	-2.25E-1	3.71E-1
PM	disease inc.	2.29E-8	9.78E-10	1.40E-9	2.53E-8	6.62E-10	3.88E-9	4.46E-11	-1.16E-8	1.83E-8
IR	kBq U-235 eq	1.50E-2	7.27E-4	4.26E-4	1.62E-2	4.92E-4	2.25E-3	3.02E-5	-7.16E-3	1.18E-2
ETP-fw	CTUe	7.30E+0	1.35E-1	7.20E-1	8.16E+0	9.14E-2	9.07E-1	5.88E-3	-3.69E+0	5.47E+0
HTP-c	CTUh	1.82E-10	4.80E-12	3.84E-11	2.25E-10	3.25E-12	9.84E-11	1.57E-13	-9.43E-11	2.32E-10
HTP-nc	CTUh	4.48E-9	1.61E-10	7.96E-10	5.44E-9	1.09E-10	1.25E-9	3.59E-12	-2.32E-9	4.47E-9
SQP	Pt	6.95E+0	1.42E-1	8.31E-2	7.18E+0	9.63E-2	5.77E-1	1.67E-2	-9.48E+0	-1.61E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.27E+0	2.39E-3	1.58E+0	2.85E+0	1.62E-3	3.56E-2	2.56E-4	-1.67E+0	1.22E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.27E+0	2.39E-3	1.58E+0	2.85E+0	1.62E-3	3.56E-2	2.56E-4	-1.67E+0	1.22E+0
PENRE	MJ	2.28E+1	1.76E-1	4.98E-1	2.34E+1	1.20E-1	7.81E-1	6.89E-3	-1.20E+1	1.24E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.28E+1	1.76E-1	4.98E-1	2.34E+1	1.20E-1	7.81E-1	6.89E-3	-1.20E+1	1.24E+1
PET	MJ	2.40E+1	1.79E-1	2.08E+0	2.63E+1	1.21E-1	8.17E-1	7.15E-3	-1.37E+1	1.36E+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	6.76E-3	1.88E-5	3.83E-3	1.06E-2	1.27E-5	4.66E-4	8.03E-6	-3.86E-3	7.23E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.83E-6	4.25E-7	4.43E-7	4.70E-6	2.88E-7	1.24E-6	7.80E-9	-3.41E-6	2.83E-6
NHWD	kg	3.19E-2	1.03E-2	4.32E-3	4.65E-2	6.98E-3	3.65E-2	2.86E-2	-1.27E-2	1.06E-1
RWD	kg	1.51E-5	1.13E-6	4.73E-7	1.67E-5	7.66E-7	2.87E-6	4.25E-8	-6.73E-6	1.36E-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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