

Environmental Profile

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

Ecochain v3.5.64



Product: 3067746 - SiTech+ Bend STB 87,5° 160
 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	2.48E+0	3.68E-2	1.82E-1	2.70E+0	3.25E-2	1.38E+0	1.56E-2	-1.51E+0	2.62E+0
GWP-f	kg CO2 eq	2.72E+0	3.68E-2	1.55E-1	2.91E+0	3.25E-2	1.07E+0	1.56E-2	-1.64E+0	2.39E+0
GWP-b	kg CO2 eq	-2.40E-1	2.23E-5	1.31E-2	-2.26E-1	1.97E-5	3.09E-1	1.37E-5	1.32E-1	2.15E-1
GWP-luluc	kg CO2 eq	1.61E-3	1.30E-5	1.31E-2	1.47E-2	1.15E-5	1.84E-4	2.63E-7	-1.36E-3	1.36E-2
ODP	kg CFC11 eq	9.34E-8	8.48E-9	1.56E-8	1.18E-7	7.49E-9	2.57E-8	3.92E-10	-7.48E-8	7.63E-8
AP	mol H+ eq	1.02E-2	2.10E-4	6.27E-4	1.10E-2	1.85E-4	1.07E-3	9.34E-6	-5.07E-3	7.22E-3
EP-fw	kg P eq	4.95E-5	3.03E-7	2.41E-6	5.22E-5	2.68E-7	5.36E-6	1.21E-8	-2.99E-5	2.80E-5
EP-m	kg N eq	1.83E-3	7.50E-5	1.06E-4	2.02E-3	6.63E-5	3.20E-4	6.59E-6	-9.57E-4	1.45E-3
EP-T	mol N eq	2.03E-2	8.26E-4	1.19E-3	2.23E-2	7.30E-4	3.52E-3	3.79E-5	-1.07E-2	1.59E-2
POCP	kg NMVOC eq	8.85E-3	2.36E-4	3.70E-4	9.45E-3	2.09E-4	1.10E-3	1.42E-5	-4.49E-3	6.29E-3
ADP-mm	kg Sb eq	8.63E-5	9.51E-7	3.78E-6	9.11E-5	8.41E-7	4.21E-6	9.37E-9	-1.30E-5	8.31E-5
ADP-f	MJ	9.35E+1	5.65E-1	2.04E+0	9.61E+1	4.99E-1	3.27E+0	2.86E-2	-4.94E+1	5.05E+1
WDP	m3 depriv.	1.84E+0	1.73E-3	7.23E-1	2.57E+0	1.53E-3	6.37E-2	1.31E-4	-1.02E+0	1.62E+0
PM	disease inc.	9.94E-8	3.32E-9	6.28E-9	1.09E-7	2.93E-9	1.74E-8	1.96E-10	-5.25E-8	7.70E-8
IR	kBq U-235 eq	6.30E-2	2.47E-3	1.91E-3	6.74E-2	2.18E-3	1.01E-2	1.33E-4	-3.24E-2	4.74E-2
ETP-fw	CTUe	3.29E+1	4.58E-1	3.23E+0	3.66E+1	4.05E-1	3.99E+0	2.54E-2	-1.72E+1	2.37E+1
HTP-c	CTUh	7.85E-10	1.63E-11	1.72E-10	9.74E-10	1.44E-11	4.40E-10	6.91E-13	-4.21E-10	1.01E-9
HTP-nc	CTUh	1.95E-8	5.47E-10	3.57E-9	2.36E-8	4.83E-10	5.54E-9	1.57E-11	-1.05E-8	1.91E-8
SQP	Pt	3.01E+1	4.83E-1	3.73E-1	3.10E+1	4.27E-1	2.58E+0	7.34E-2	-4.35E+1	-9.37E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.55E+0	8.10E-3	7.07E+0	1.26E+1	7.16E-3	1.59E-1	1.12E-3	-7.68E+0	5.12E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.55E+0	8.10E-3	7.07E+0	1.26E+1	7.16E-3	1.59E-1	1.12E-3	-7.68E+0	5.12E+0
PENRE	MJ	1.00E+2	5.99E-1	2.23E+0	1.03E+2	5.30E-1	3.49E+0	3.03E-2	-5.32E+1	5.40E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.00E+2	5.99E-1	2.23E+0	1.03E+2	5.30E-1	3.49E+0	3.03E-2	-5.32E+1	5.40E+1
PET	MJ	1.06E+2	6.07E-1	9.31E+0	1.16E+2	5.37E-1	3.65E+0	3.15E-2	-6.09E+1	5.91E+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	2.95E-2	6.39E-5	1.72E-2	4.67E-2	5.65E-5	2.02E-3	3.53E-5	-1.76E-2	3.12E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.64E-5	1.44E-6	1.99E-6	1.98E-5	1.28E-6	5.54E-6	3.43E-8	-1.49E-5	1.18E-5
NHWD	kg	1.39E-1	3.50E-2	1.94E-2	1.93E-1	3.09E-2	1.62E-1	1.26E-1	-5.70E-2	4.55E-1
RWD	kg	6.18E-5	3.84E-6	2.12E-6	6.77E-5	3.39E-6	1.29E-5	1.87E-7	-3.03E-5	5.39E-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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