

Environmental Profile

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

Ecochain v3.5.64



Product: 3067731 - SiTech+ Bend STB 45° 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	2.00E+0	2.97E-2	1.45E-1	2.17E+0	2.61E-2	1.11E+0	1.26E-2	-1.22E+0	2.10E+0
GWP-f	kg CO2 eq	2.18E+0	2.97E-2	1.24E-1	2.34E+0	2.61E-2	8.79E-1	1.26E-2	-1.31E+0	1.95E+0
GWP-b	kg CO2 eq	-1.84E-1	1.80E-5	1.05E-2	-1.73E-1	1.58E-5	2.30E-1	1.10E-5	8.69E-2	1.44E-1
GWP-luluc	kg CO2 eq	1.20E-3	1.05E-5	1.05E-2	1.17E-2	9.23E-6	1.47E-4	2.12E-7	-9.57E-4	1.09E-2
ODP	kg CFC11 eq	7.88E-8	6.84E-9	1.24E-8	9.81E-8	6.01E-9	2.04E-8	3.16E-10	-5.95E-8	6.53E-8
AP	mol H+ eq	8.20E-3	1.69E-4	5.00E-4	8.86E-3	1.49E-4	8.53E-4	7.53E-6	-3.97E-3	5.91E-3
EP-fw	kg P eq	3.93E-5	2.44E-7	1.93E-6	4.14E-5	2.15E-7	4.27E-6	9.76E-9	-2.23E-5	2.37E-5
EP-m	kg N eq	1.46E-3	6.05E-5	8.44E-5	1.60E-3	5.32E-5	2.54E-4	5.40E-6	-7.44E-4	1.17E-3
EP-T	mol N eq	1.62E-2	6.66E-4	9.49E-4	1.78E-2	5.86E-4	2.79E-3	3.06E-5	-8.33E-3	1.29E-2
POCP	kg NMVOC eq	7.12E-3	1.90E-4	2.95E-4	7.60E-3	1.68E-4	8.74E-4	1.15E-5	-3.53E-3	5.13E-3
ADP-mm	kg Sb eq	7.92E-5	7.67E-7	3.02E-6	8.29E-5	6.75E-7	3.33E-6	7.56E-9	-1.06E-5	7.64E-5
ADP-f	MJ	7.51E+1	4.55E-1	1.63E+0	7.72E+1	4.00E-1	2.60E+0	2.30E-2	-3.94E+1	4.08E+1
WDP	m3 depriv.	1.48E+0	1.40E-3	5.77E-1	2.06E+0	1.23E-3	5.11E-2	1.06E-4	-7.86E-1	1.33E+0
PM	disease inc.	7.97E-8	2.68E-9	5.01E-9	8.74E-8	2.35E-9	1.37E-8	1.58E-10	-4.01E-8	6.36E-8
IR	kBq U-235 eq	5.19E-2	1.99E-3	1.52E-3	5.54E-2	1.75E-3	7.97E-3	1.07E-4	-2.48E-2	4.04E-2
ETP-fw	CTUe	2.45E+1	3.70E-1	2.57E+0	2.75E+1	3.25E-1	3.19E+0	2.07E-2	-1.24E+1	1.86E+1
HTP-c	CTUh	6.29E-10	1.32E-11	1.37E-10	7.79E-10	1.16E-11	3.49E-10	5.58E-13	-3.23E-10	8.17E-10
HTP-nc	CTUh	1.56E-8	4.41E-10	2.85E-9	1.89E-8	3.88E-10	4.41E-9	1.27E-11	-8.03E-9	1.57E-8
SQP	Pt	2.28E+1	3.90E-1	2.97E-1	2.35E+1	3.43E-1	2.05E+0	5.92E-2	-3.08E+1	-4.85E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.20E+0	6.53E-3	5.64E+0	9.85E+0	5.75E-3	1.26E-1	9.07E-4	-5.44E+0	4.55E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.20E+0	6.53E-3	5.64E+0	9.85E+0	5.75E-3	1.26E-1	9.07E-4	-5.44E+0	4.55E+0
PENRE	MJ	8.06E+1	4.83E-1	1.78E+0	8.29E+1	4.25E-1	2.77E+0	2.45E-2	-4.25E+1	4.36E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.06E+1	4.83E-1	1.78E+0	8.29E+1	4.25E-1	2.77E+0	2.45E-2	-4.25E+1	4.36E+1
PET	MJ	8.48E+1	4.90E-1	7.42E+0	9.27E+1	4.31E-1	2.90E+0	2.54E-2	-4.79E+1	4.81E+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	2.37E-2	5.15E-5	1.37E-2	3.75E-2	4.53E-5	1.64E-3	2.85E-5	-1.34E-2	2.58E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.32E-5	1.16E-6	1.58E-6	1.59E-5	1.02E-6	4.40E-6	2.77E-8	-1.18E-5	9.53E-6
NHWD	kg	1.10E-1	2.82E-2	1.54E-2	1.54E-1	2.48E-2	1.29E-1	1.02E-1	-4.38E-2	3.65E-1
RWD	kg	5.16E-5	3.10E-6	1.69E-6	5.64E-5	2.72E-6	1.02E-5	1.51E-7	-2.32E-5	4.63E-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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