

Environmental Profile

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

Ecochain v3.5.64



Product: 3067715 - SiTech+ Bend STB 15° 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	1.63E+0	2.51E-2	1.17E-1	1.77E+0	2.12E-2	9.68E-1	1.03E-2	-9.94E-1	1.77E+0
GWP-f	kg CO2 eq	1.81E+0	2.51E-2	1.00E-1	1.94E+0	2.12E-2	7.38E-1	1.03E-2	-1.08E+0	1.63E+0
GWP-b	kg CO2 eq	-1.85E-1	1.52E-5	8.47E-3	-1.77E-1	1.29E-5	2.30E-1	9.02E-6	8.76E-2	1.41E-1
GWP-luluc	kg CO2 eq	1.11E-3	8.88E-6	8.47E-3	9.58E-3	7.51E-6	1.19E-4	1.73E-7	-9.13E-4	8.80E-3
ODP	kg CFC11 eq	7.27E-8	5.78E-9	1.01E-8	8.85E-8	4.89E-9	1.68E-8	2.58E-10	-5.11E-8	5.93E-8
AP	mol H+ eq	6.90E-3	1.43E-4	4.05E-4	7.45E-3	1.21E-4	7.04E-4	6.16E-6	-3.33E-3	4.94E-3
EP-fw	kg P eq	3.40E-5	2.06E-7	1.56E-6	3.57E-5	1.75E-7	3.48E-6	7.99E-9	-1.98E-5	1.96E-5
EP-m	kg N eq	1.24E-3	5.11E-5	6.83E-5	1.36E-3	4.32E-5	2.10E-4	4.51E-6	-6.32E-4	9.85E-4
EP-T	mol N eq	1.37E-2	5.64E-4	7.68E-4	1.50E-2	4.77E-4	2.32E-3	2.50E-5	-7.09E-3	1.08E-2
POCP	kg NMVOC eq	5.98E-3	1.61E-4	2.39E-4	6.38E-3	1.36E-4	7.23E-4	9.38E-6	-2.95E-3	4.29E-3
ADP-mm	kg Sb eq	7.43E-5	6.49E-7	2.44E-6	7.74E-5	5.49E-7	2.74E-6	6.18E-9	-9.09E-6	7.16E-5
ADP-f	MJ	6.18E+1	3.85E-1	1.32E+0	6.35E+1	3.26E-1	2.13E+0	1.89E-2	-3.23E+1	3.37E+1
WDP	m3 depriv.	1.22E+0	1.18E-3	4.67E-1	1.69E+0	1.00E-3	4.18E-2	8.63E-5	-6.63E-1	1.07E+0
PM	disease inc.	6.84E-8	2.26E-9	4.05E-9	7.47E-8	1.92E-9	1.13E-8	1.30E-10	-3.48E-8	5.32E-8
IR	kBq U-235 eq	4.52E-2	1.68E-3	1.23E-3	4.81E-2	1.42E-3	6.54E-3	8.78E-5	-2.15E-2	3.47E-2
ETP-fw	CTUe	2.27E+1	3.13E-1	2.08E+0	2.51E+1	2.64E-1	2.66E+0	1.72E-2	-1.15E+1	1.65E+1
HTP-c	CTUh	5.46E-10	1.11E-11	1.11E-10	6.69E-10	9.41E-12	2.86E-10	4.57E-13	-2.86E-10	6.78E-10
HTP-nc	CTUh	1.33E-8	3.73E-10	2.30E-9	1.60E-8	3.15E-10	3.62E-9	1.05E-11	-6.97E-9	1.30E-8
SQP	Pt	2.23E+1	3.29E-1	2.40E-1	2.29E+1	2.79E-1	1.67E+0	4.84E-2	-3.06E+1	-5.68E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.01E+0	5.53E-3	4.57E+0	8.59E+0	4.67E-3	1.03E-1	7.43E-4	-5.35E+0	3.35E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.01E+0	5.53E-3	4.57E+0	8.59E+0	4.67E-3	1.03E-1	7.43E-4	-5.35E+0	3.35E+0
PENRE	MJ	6.63E+1	4.09E-1	1.44E+0	6.82E+1	3.46E-1	2.27E+0	2.00E-2	-3.48E+1	3.60E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.63E+1	4.09E-1	1.44E+0	6.82E+1	3.46E-1	2.27E+0	2.00E-2	-3.48E+1	3.60E+1
PET	MJ	7.03E+1	4.14E-1	6.01E+0	7.68E+1	3.50E-1	2.37E+0	2.07E-2	-4.02E+1	3.93E+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	1.99E-2	4.36E-5	1.11E-2	3.10E-2	3.69E-5	1.37E-3	2.33E-5	-1.15E-2	2.09E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.16E-5	9.85E-7	1.28E-6	1.39E-5	8.33E-7	3.63E-6	2.26E-8	-1.02E-5	8.20E-6
NHWD	kg	9.61E-2	2.39E-2	1.25E-2	1.32E-1	2.02E-2	1.06E-1	8.31E-2	-3.84E-2	3.03E-1
RWD	kg	4.59E-5	2.62E-6	1.37E-6	4.99E-5	2.22E-6	8.36E-6	1.23E-7	-2.02E-5	4.04E-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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