

Environmental Profile

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

Ecochain v3.5.64



Product: 3067711 - SiTech+ Bend STB 15° 75
 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	2.74E-1	4.42E-3	1.98E-2	2.98E-1	3.61E-3	1.82E-1	1.75E-3	-1.69E-1	3.17E-1
GWP-f	kg CO2 eq	3.17E-1	4.42E-3	1.69E-2	3.38E-1	3.61E-3	1.30E-1	1.75E-3	-1.89E-1	2.85E-1
GWP-b	kg CO2 eq	-4.32E-2	2.68E-6	1.43E-3	-4.17E-2	2.19E-6	5.28E-2	1.54E-6	1.95E-2	3.05E-2
GWP-luluc	kg CO2 eq	2.23E-4	1.56E-6	1.43E-3	1.66E-3	1.28E-6	2.04E-5	2.97E-8	-1.92E-4	1.49E-3
ODP	kg CFC11 eq	1.42E-8	1.02E-9	1.70E-9	1.69E-8	8.32E-10	2.93E-9	4.42E-11	-9.39E-9	1.13E-8
AP	mol H+ eq	1.23E-3	2.52E-5	6.84E-5	1.32E-3	2.06E-5	1.22E-4	1.05E-6	-5.97E-4	8.68E-4
EP-fw	kg P eq	6.27E-6	3.64E-8	2.63E-7	6.57E-6	2.97E-8	5.96E-7	1.37E-9	-3.82E-6	3.38E-6
EP-m	kg N eq	2.25E-4	9.01E-6	1.15E-5	2.45E-4	7.36E-6	3.69E-5	7.87E-7	-1.15E-4	1.75E-4
EP-T	mol N eq	2.48E-3	9.93E-5	1.30E-4	2.71E-3	8.11E-5	4.06E-4	4.28E-6	-1.29E-3	1.90E-3
POCP	kg NMVOC eq	1.06E-3	2.84E-5	4.03E-5	1.13E-3	2.32E-5	1.26E-4	1.60E-6	-5.28E-4	7.54E-4
ADP-mm	kg Sb eq	1.45E-5	1.14E-7	4.13E-7	1.50E-5	9.34E-8	4.75E-7	1.06E-9	-1.65E-6	1.39E-5
ADP-f	MJ	1.07E+1	6.79E-2	2.23E-1	1.10E+1	5.54E-2	3.66E-1	3.23E-3	-5.56E+0	5.83E+0
WDP	m3 depriv.	2.12E-1	2.08E-4	7.89E-2	2.91E-1	1.70E-4	7.16E-3	1.48E-5	-1.19E-1	1.79E-1
PM	disease inc.	1.25E-8	3.99E-10	6.85E-10	1.36E-8	3.26E-10	1.95E-9	2.22E-11	-6.54E-9	9.33E-9
IR	kBq U-235 eq	8.35E-3	2.97E-4	2.08E-4	8.86E-3	2.42E-4	1.13E-3	1.50E-5	-4.01E-3	6.23E-3
ETP-fw	CTUe	4.56E+0	5.51E-2	3.52E-1	4.96E+0	4.50E-2	4.66E-1	2.99E-3	-2.34E+0	3.14E+0
HTP-c	CTUh	1.02E-10	1.96E-12	1.88E-11	1.23E-10	1.60E-12	4.92E-11	7.82E-14	-5.54E-11	1.18E-10
HTP-nc	CTUh	2.42E-9	6.57E-11	3.89E-10	2.87E-9	5.36E-11	6.24E-10	1.80E-12	-1.31E-9	2.24E-9
SQP	Pt	4.97E+0	5.81E-2	4.06E-2	5.07E+0	4.74E-2	2.86E-1	8.28E-3	-6.83E+0	-1.41E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.66E-1	9.74E-4	7.72E-1	1.64E+0	7.95E-4	1.76E-2	1.27E-4	-1.18E+0	4.78E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.66E-1	9.74E-4	7.72E-1	1.64E+0	7.95E-4	1.76E-2	1.27E-4	-1.18E+0	4.78E-1
PENRE	MJ	1.15E+1	7.20E-2	2.43E-1	1.18E+1	5.88E-2	3.89E-1	3.42E-3	-5.99E+0	6.22E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.15E+1	7.20E-2	2.43E-1	1.18E+1	5.88E-2	3.89E-1	3.42E-3	-5.99E+0	6.22E+0
PET	MJ	1.23E+1	7.30E-2	1.02E+0	1.34E+1	5.96E-2	4.07E-1	3.55E-3	-7.17E+0	6.70E+0
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	3.51E-3	7.68E-6	1.87E-3	5.39E-3	6.27E-6	2.40E-4	3.99E-6	-2.14E-3	3.50E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.21E-6	1.74E-7	2.17E-7	2.60E-6	1.42E-7	6.31E-7	3.87E-9	-1.88E-6	1.50E-6
NHWD	kg	1.80E-2	4.21E-3	2.11E-3	2.44E-2	3.43E-3	1.83E-2	1.42E-2	-7.33E-3	5.29E-2
RWD	kg	8.63E-6	4.61E-7	2.31E-7	9.33E-6	3.77E-7	1.45E-6	2.11E-8	-3.81E-6	7.36E-6
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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777