

Environmental Profile

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

Ecochain v3.5.64



Product: 3067726 - SiTech+ Bend STB 45° 50
 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

This document and supporting material contain confidential and proprietary business information of Wavin - IT - SM Maddalena. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - IT - SM Maddalena.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.41E-1	3.16E-3	9.30E-3	1.54E-1	1.73E-3	8.64E-2	8.50E-4	-8.08E-2	1.62E-1
GWP-f	kg CO2 eq	1.55E-1	3.16E-3	7.96E-3	1.67E-1	1.73E-3	6.72E-2	8.50E-4	-9.10E-2	1.45E-1
GWP-b	kg CO2 eq	-1.43E-2	1.92E-6	6.72E-4	-1.37E-2	1.05E-6	1.92E-2	7.52E-7	1.02E-2	1.58E-2
GWP-luluc	kg CO2 eq	1.13E-4	1.12E-6	6.72E-4	7.86E-4	6.11E-7	9.63E-6	1.45E-8	-9.54E-5	7.01E-4
ODP	kg CFC11 eq	8.22E-9	7.28E-10	7.99E-10	9.74E-9	3.98E-10	1.40E-9	2.15E-11	-4.69E-9	6.87E-9
AP	mol H+ eq	6.13E-4	1.80E-5	3.21E-5	6.63E-4	9.83E-6	5.88E-5	5.13E-7	-2.83E-4	4.49E-4
EP-fw	kg P eq	3.19E-6	2.60E-8	1.24E-7	3.34E-6	1.42E-8	2.82E-7	6.66E-10	-1.86E-6	1.77E-6
EP-m	kg N eq	1.12E-4	6.44E-6	5.42E-6	1.23E-4	3.52E-6	1.78E-5	4.03E-7	-5.46E-5	9.06E-5
EP-T	mol N eq	1.23E-3	7.09E-5	6.10E-5	1.36E-3	3.88E-5	1.96E-4	2.08E-6	-6.13E-4	9.84E-4
POCP	kg NMVOC eq	5.25E-4	2.03E-5	1.89E-5	5.64E-4	1.11E-5	6.07E-5	7.79E-7	-2.48E-4	3.89E-4
ADP-mm	kg Sb eq	9.24E-6	8.17E-8	1.94E-7	9.51E-6	4.47E-8	2.26E-7	5.14E-10	-8.52E-7	8.93E-6
ADP-f	MJ	5.19E+0	4.85E-2	1.05E-1	5.35E+0	2.65E-2	1.74E-1	1.57E-3	-2.65E+0	2.89E+0
WDP	m3 depriv.	1.04E-1	1.49E-4	3.71E-2	1.41E-1	8.13E-5	3.45E-3	7.18E-6	-5.76E-2	8.67E-2
PM	disease inc.	6.27E-9	2.85E-10	3.22E-10	6.88E-9	1.56E-10	9.28E-10	1.08E-11	-3.08E-9	4.89E-9
IR	kBq U-235 eq	4.48E-3	2.12E-4	9.77E-5	4.79E-3	1.16E-4	5.37E-4	7.31E-6	-1.94E-3	3.51E-3
ETP-fw	CTUe	2.39E+0	3.94E-2	1.65E-1	2.60E+0	2.15E-2	2.31E-1	1.52E-3	-1.17E+0	1.69E+0
HTP-c	CTUh	4.93E-11	1.40E-12	8.81E-12	5.95E-11	7.66E-13	2.33E-11	3.82E-14	-2.48E-11	5.88E-11
HTP-nc	CTUh	1.21E-9	4.69E-11	1.83E-10	1.44E-9	2.57E-11	2.99E-10	8.92E-13	-6.23E-10	1.14E-9
SQP	Pt	1.92E+0	4.15E-2	1.91E-2	1.98E+0	2.27E-2	1.35E-1	4.02E-3	-2.99E+0	-8.48E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.50E-1	6.96E-4	3.63E-1	7.13E-1	3.80E-4	8.35E-3	6.23E-5	-5.27E-1	1.95E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.50E-1	6.96E-4	3.63E-1	7.13E-1	3.80E-4	8.35E-3	6.23E-5	-5.27E-1	1.95E-1
PENRE	MJ	5.57E+0	5.15E-2	1.14E-1	5.74E+0	2.81E-2	1.85E-1	1.66E-3	-2.86E+0	3.09E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.57E+0	5.15E-2	1.14E-1	5.74E+0	2.81E-2	1.85E-1	1.66E-3	-2.86E+0	3.09E+0
PET	MJ	5.92E+0	5.22E-2	4.77E-1	6.45E+0	2.85E-2	1.93E-1	1.73E-3	-3.39E+0	3.28E+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	1.76E-3	5.49E-6	8.81E-4	2.65E-3	3.00E-6	1.21E-4	1.94E-6	-1.05E-3	1.73E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.13E-6	1.24E-7	1.02E-7	1.35E-6	6.78E-8	3.04E-7	1.88E-9	-9.15E-7	8.10E-7
NHWD	kg	9.00E-3	3.01E-3	9.92E-4	1.30E-2	1.64E-3	8.76E-3	6.91E-3	-3.32E-3	2.70E-2
RWD	kg	4.80E-6	3.30E-7	1.09E-7	5.24E-6	1.80E-7	6.89E-7	1.03E-8	-1.85E-6	4.27E-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