

Environmental Profile

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

Ecochain v3.5.64



Product: 3067765 - SiTech+ Branch STEA 45° 160X160
 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	4.32E+0	6.57E-2	3.15E-1	4.70E+0	5.66E-2	2.51E+0	2.72E-2	-2.62E+0	4.68E+0
GWP-f	kg CO2 eq	4.80E+0	6.56E-2	2.70E-1	5.14E+0	5.66E-2	1.89E+0	2.72E-2	-2.88E+0	4.23E+0
GWP-b	kg CO2 eq	-4.82E-1	3.99E-5	2.28E-2	-4.59E-1	3.44E-5	6.18E-1	2.39E-5	2.66E-1	4.25E-1
GWP-luluc	kg CO2 eq	3.06E-3	2.32E-5	2.28E-2	2.58E-2	2.00E-5	3.21E-4	4.59E-7	-2.65E-3	2.35E-2
ODP	kg CFC11 eq	1.76E-7	1.51E-8	2.70E-8	2.18E-7	1.30E-8	4.53E-8	6.84E-10	-1.35E-7	1.42E-7
AP	mol H+ eq	1.81E-2	3.74E-4	1.09E-3	1.96E-2	3.22E-4	1.89E-3	1.63E-5	-9.05E-3	1.28E-2
EP-fw	kg P eq	8.99E-5	5.40E-7	4.19E-6	9.46E-5	4.66E-7	9.36E-6	2.11E-8	-5.55E-5	4.89E-5
EP-m	kg N eq	3.29E-3	1.34E-4	1.84E-4	3.61E-3	1.15E-4	5.66E-4	1.16E-5	-1.72E-3	2.59E-3
EP-T	mol N eq	3.63E-2	1.47E-3	2.06E-3	3.99E-2	1.27E-3	6.22E-3	6.62E-5	-1.93E-2	2.82E-2
POCP	kg NMVOC eq	1.57E-2	4.21E-4	6.41E-4	1.68E-2	3.63E-4	1.95E-3	2.48E-5	-7.98E-3	1.11E-2
ADP-mm	kg Sb eq	1.64E-4	1.70E-6	6.56E-6	1.72E-4	1.46E-6	7.40E-6	1.64E-8	-2.34E-5	1.58E-4
ADP-f	MJ	1.64E+2	1.01E+0	3.55E+0	1.68E+2	8.69E-1	5.73E+0	4.99E-2	-8.64E+1	8.87E+1
WDP	m3 depriv.	3.24E+0	3.09E-3	1.25E+0	4.49E+0	2.67E-3	1.11E-1	2.29E-4	-1.82E+0	2.79E+0
PM	disease inc.	1.79E-7	5.93E-9	1.09E-8	1.96E-7	5.11E-9	3.05E-8	3.43E-10	-9.58E-8	1.36E-7
IR	kBq U-235 eq	1.15E-1	4.40E-3	3.31E-3	1.22E-1	3.80E-3	1.77E-2	2.32E-4	-5.90E-2	8.50E-2
ETP-fw	CTUe	6.26E+1	8.18E-1	5.60E+0	6.90E+1	7.05E-1	7.05E+0	4.46E-2	-3.30E+1	4.39E+1
HTP-c	CTUh	1.43E-9	2.91E-11	2.98E-10	1.76E-9	2.51E-11	7.70E-10	1.21E-12	-7.77E-10	1.78E-9
HTP-nc	CTUh	3.50E-8	9.75E-10	6.19E-9	4.22E-8	8.41E-10	9.70E-9	2.75E-11	-1.92E-8	3.35E-8
SQP	Pt	5.95E+1	8.62E-1	6.46E-1	6.10E+1	7.43E-1	4.50E+0	1.28E-1	-8.66E+1	-2.02E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.08E+1	1.45E-2	1.23E+1	2.31E+1	1.25E-2	2.77E-1	1.96E-3	-1.52E+1	8.15E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.08E+1	1.45E-2	1.23E+1	2.31E+1	1.25E-2	2.77E-1	1.96E-3	-1.52E+1	8.15E+0
PENRE	MJ	1.76E+2	1.07E+0	3.87E+0	1.81E+2	9.22E-1	6.10E+0	5.30E-2	-9.31E+1	9.47E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.76E+2	1.07E+0	3.87E+0	1.81E+2	9.22E-1	6.10E+0	5.30E-2	-9.31E+1	9.47E+1
PET	MJ	1.87E+2	1.08E+0	1.61E+1	2.04E+2	9.35E-1	6.38E+0	5.49E-2	-1.08E+2	1.03E+2
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	5.23E-2	1.14E-4	2.98E-2	8.22E-2	9.83E-5	3.57E-3	6.17E-5	-3.20E-2	5.39E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.02E-5	2.58E-6	3.45E-6	3.62E-5	2.22E-6	9.74E-6	5.99E-8	-2.69E-5	2.13E-5
NHWD	kg	2.54E-1	6.25E-2	3.36E-2	3.50E-1	5.38E-2	2.84E-1	2.20E-1	-1.05E-1	8.03E-1
RWD	kg	1.14E-4	6.85E-6	3.68E-6	1.24E-4	5.91E-6	2.26E-5	3.26E-7	-5.54E-5	9.76E-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



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