

Environmental Profile

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

Ecochain v3.5.64



Product: 3067796 - SiTech+ Coupler STU 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

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	1.76E+0	2.61E-2	1.17E-1	1.90E+0	2.19E-2	1.10E+0	1.08E-2	-1.05E+0	1.99E+0
GWP-f	kg CO2 eq	1.95E+0	2.60E-2	1.00E-1	2.07E+0	2.19E-2	8.69E-1	1.08E-2	-1.13E+0	1.84E+0
GWP-b	kg CO2 eq	-1.88E-1	1.58E-5	8.45E-3	-1.79E-1	1.33E-5	2.30E-1	9.57E-6	8.77E-2	1.39E-1
GWP-luluc	kg CO2 eq	1.22E-3	9.21E-6	8.45E-3	9.67E-3	7.73E-6	1.20E-4	1.84E-7	-9.17E-4	8.88E-3
ODP	kg CFC11 eq	1.05E-7	6.00E-9	1.00E-8	1.21E-7	5.04E-9	1.71E-8	2.73E-10	-5.74E-8	8.63E-8
AP	mol H+ eq	7.68E-3	1.48E-4	4.04E-4	8.23E-3	1.24E-4	7.25E-4	6.53E-6	-3.39E-3	5.70E-3
EP-fw	kg P eq	3.86E-5	2.14E-7	1.55E-6	4.03E-5	1.80E-7	3.52E-6	8.48E-9	-2.00E-5	2.41E-5
EP-m	kg N eq	1.36E-3	5.31E-5	6.82E-5	1.48E-3	4.45E-5	2.18E-4	5.22E-6	-6.47E-4	1.10E-3
EP-T	mol N eq	1.51E-2	5.85E-4	7.66E-4	1.65E-2	4.91E-4	2.40E-3	2.65E-5	-7.25E-3	1.21E-2
POCP	kg NMVOC eq	6.60E-3	1.67E-4	2.38E-4	7.01E-3	1.40E-4	7.44E-4	9.91E-6	-3.01E-3	4.89E-3
ADP-mm	kg Sb eq	1.26E-4	6.73E-7	2.44E-6	1.29E-4	5.65E-7	2.77E-6	6.54E-9	-1.08E-5	1.22E-4
ADP-f	MJ	6.56E+1	4.00E-1	1.32E+0	6.73E+1	3.35E-1	2.15E+0	2.00E-2	-3.32E+1	3.66E+1
WDP	m3 depriv.	1.31E+0	1.23E-3	4.66E-1	1.77E+0	1.03E-3	4.34E-2	9.14E-5	-6.67E-1	1.15E+0
PM	disease inc.	7.78E-8	2.35E-9	4.04E-9	8.42E-8	1.97E-9	1.14E-8	1.37E-10	-3.51E-8	6.26E-8
IR	kBq U-235 eq	5.71E-2	1.75E-3	1.23E-3	6.01E-2	1.47E-3	6.61E-3	9.31E-5	-2.21E-2	4.61E-2
ETP-fw	CTUe	2.56E+1	3.24E-1	2.08E+0	2.80E+1	2.72E-1	2.88E+0	1.96E-2	-1.16E+1	1.96E+1
HTP-c	CTUh	6.18E-10	1.15E-11	1.11E-10	7.40E-10	9.69E-12	2.88E-10	4.86E-13	-2.91E-10	7.47E-10
HTP-nc	CTUh	1.51E-8	3.87E-10	2.30E-9	1.77E-8	3.25E-10	3.72E-9	1.14E-11	-7.06E-9	1.47E-8
SQP	Pt	2.31E+1	3.42E-1	2.40E-1	2.37E+1	2.87E-1	1.68E+0	5.12E-2	-3.06E+1	-4.89E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.17E+0	5.73E-3	4.55E+0	8.73E+0	4.81E-3	1.04E-1	7.94E-4	-5.36E+0	3.48E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.17E+0	5.73E-3	4.55E+0	8.73E+0	4.81E-3	1.04E-1	7.94E-4	-5.36E+0	3.48E+0
PENRE	MJ	7.03E+1	4.24E-1	1.44E+0	7.22E+1	3.56E-1	2.29E+0	2.12E-2	-3.58E+1	3.90E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.03E+1	4.24E-1	1.44E+0	7.22E+1	3.56E-1	2.29E+0	2.12E-2	-3.58E+1	3.90E+1
PET	MJ	7.45E+1	4.30E-1	5.99E+0	8.09E+1	3.61E-1	2.40E+0	2.20E-2	-4.12E+1	4.25E+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	2.21E-2	4.52E-5	1.11E-2	3.32E-2	3.80E-5	1.54E-3	2.47E-5	-1.16E-2	2.32E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.39E-5	1.02E-6	1.28E-6	1.62E-5	8.58E-7	3.75E-6	2.39E-8	-1.13E-5	9.58E-6
NHWD	kg	1.09E-1	2.48E-2	1.25E-2	1.46E-1	2.08E-2	1.09E-1	8.79E-2	-3.90E-2	3.25E-1
RWD	kg	6.18E-5	2.72E-6	1.37E-6	6.59E-5	2.28E-6	8.45E-6	1.31E-7	-2.11E-5	5.57E-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