Environmental Profile

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

Ecochain v3.5.64

Product:	3085677 - Sitech+ IJM Double Lenght Socket STLL 90
Unit:	1 piece
Manufacturer:	Wavin - IT - SM Maddalena

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.

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

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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.66E-1	1.12E-2	5.52E-2	6.32E-1	7.03E-3	3.26E-1	3.39E-3	-3.16E-1	6.53E-1
GWP-f	kg CO2 eq	6.22E-1	1.12E-2	4.73E-2	6.80E-1	7.02E-3	2.43E-1	3.39E-3	-3.71E-1	5.63E-1
GWP-b	kg CO2 eq	-5.64E-2	6.83E-6	3.99E-3	-5.24E-2	4.26E-6	8.33E-2	2.98E-6	5.53E-2	8.62E-2
GWP-luluc	kg CO2 eq	5.10E-4	3.98E-6	3.99E-3	4.50E-3	2.48E-6	4.02E-5	5.72E-8	-4.83E-4	4.06E-3
ODP	kg CFC11 eq	2.64E-8	2.59E-9	4.74E-9	3.37E-8	1.62E-9	5.92E-9	8.52E-11	-1.86E-8	2.27E-8
AP	mol H+ eq	2.41E-3	6.40E-5	1.91E-4	2.66E-3	4.00E-5	2.45E-4	2.03E-6	-1.22E-3	1.73E-3
EP-fw	kg P eq	1.28E-5	9.25E-8	7.34E-7	1.36E-5	5.78E-8	1.18E-6	2.64E-9	-8.79E-6	6.08E-6
EP-m	kg N eq	4.53E-4	2.29E-5	3.22E-5	5.08E-4	1.43E-5	7.42E-5	1.48E-6	-2.37E-4	3.62E-4
EP-T	mol N eq	4.97E-3	2.52E-4	3.62E-4	5.58E-3	1.58E-4	8.16E-4	8.26E-6	-2.66E-3	3.90E-3
POCP	kg NMVOC eq	2.06E-3	7.22E-5	1.12E-4	2.24E-3	4.51E-5	2.54E-4	3.10E-6	-1.05E-3	1.49E-3
ADP-mm	kg Sb eq	2.46E-5	2.91E-7	1.15E-6	2.61E-5	1.82E-7	9.61E-7	2.04E-9	-3.13E-6	2.41E-5
ADP-f	MJ	2.07E+1	1.73E-1	6.22E-1	2.15E+1	1.08E-1	7.28E-1	6.22E-3	-1.09E+1	1.15E+1
WDP	m3 depriv.	4.12E-1	5.30E-4	2.20E-1	6.33E-1	3.31E-4	1.40E-2	2.85E-5	-2.57E-1	3.90E-1
PM	disease inc.	2.45E-8	1.01E-9	1.91E-9	2.74E-8	6.34E-10	3.93E-9	4.28E-11	-1.39E-8	1.81E-8
IR	kBq U-235 eq	1.58E-2	7.54E-4	5.80E-4	1.72E-2	4.71E-4	2.27E-3	2.90E-5	-8.68E-3	1.13E-2
ETP-fw	CTUe	1.07E+1	1.40E-1	9.81E-1	1.19E+1	8.75E-2	9.22E-1	5.65E-3	-5.77E+0	7.11E+0
HTP-c	CTUh	1.96E-10	4.99E-12	5.23E-11	2.53E-10	3.11E-12	9.81E-11	1.51E-13	-1.08E-10	2.46E-10
HTP-nc	CTUh	4.80E-9	1.67E-10	1.09E-9	6.05E-9	1.04E-10	1.24E-9	3.45E-12	-2.81E-9	4.58E-9
SQP	Pt	8.11E+0	1.48E-1	1.13E-1	8.37E+0	9.22E-2	5.67E-1	1.60E-2	-1.45E+1	-5.48E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.49E+0	2.48E-3	2.15E+0	3.65E+0	1.55E-3	3.48E-2	2.45E-4	-2.58E+0	1.10E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.49E+0	2.48E-3	2.15E+0	3.65E+0	1.55E-3	3.48E-2	2.45E-4	-2.58E+0	1.10E+0
PENRE	MJ	2.23E+1	1.83E-1	6.78E-1	2.31E+1	1.14E-1	7.75E-1	6.60E-3	-1.18E+1	1.23E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.23E+1	1.83E-1	6.78E-1	2.31E+1	1.14E-1	7.75E-1	6.60E-3	-1.18E+1	1.23E+1
PET	MJ	2.38E+1	1.86E-1	2.83E+0	2.68E+1	1.16E-1	8.10E-1	6.85E-3	-1.43E+1	1.34E+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	6.87E-3	1.95E-5	5.23E-3	1.21E-2	1.22E-5	4.59E-4	7.69E-6	-4.80E-3	7.79E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.44E-6	4.41E-7	6.04E-7	5.49E-6	2.76E-7	1.26E-6	7.47E-9	-3.65E-6	3.39E-6
NHWD	kg	3.75E-2	1.07E-2	5.89E-3	5.40E-2	6.68E-3	3.60E-2	2.74E-2	-1.46E-2	1.10E-1
RWD	kg	1.60E-5	1.17E-6	6.45E-7	1.78E-5	7.33E-7	2.92E-6	4.07E-8	-8.19E-6	1.33E-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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