Environmental Profile

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

Ecochain v3.5.64

Product:	3080379 - ED Tech PP Pipe HTDM 50 L=1 S/S
Unit:	1 piece
Manufacturer:	Wavin - IT - SM Maddalena

PP SWR (ED Tech) products made of PP for waste water discharge are the ideal solution for anyone who wants a quick and easy connection system. A push-fit system, made watertight using elastomeric seals. Triple-layer pipes, with a white inner layer for easier inspection. Low linear expansion.

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	4.55E-1	3.82E-2	3.25E-2	5.26E-1	7.46E-3	2.97E-1	3.06E-3	-3.04E-1	5.30E-1
GWP-f	kg CO2 eq	5.24E-1	3.82E-2	2.90E-2	5.91E-1	7.45E-3	2.27E-1	3.06E-3	-3.03E-1	5.26E-1
GWP-b	kg CO2 eq	-6.91E-2	2.32E-5	1.84E-3	-6.72E-2	4.53E-6	7.03E-2	2.72E-6	-9.85E-4	2.10E-3
GWP-luluc	kg CO2 eq	2.02E-4	1.35E-5	1.65E-3	1.87E-3	2.64E-6	4.13E-5	5.67E-8	-7.68E-5	1.84E-3
ODP	kg CFC11 eq	2.05E-8	8.79E-9	3.16E-9	3.24E-8	1.72E-9	5.50E-9	8.58E-11	-1.28E-8	2.69E-8
AP	mol H+ eq	2.19E-3	2.17E-4	9.80E-5	2.51E-3	4.25E-5	2.32E-4	2.02E-6	-8.61E-4	1.92E-3
EP-fw	kg P eq	9.32E-6	3.14E-7	3.88E-7	1.00E-5	6.13E-8	1.20E-6	2.56E-9	-3.47E-6	7.81E-6
EP-m	kg N eq	3.45E-4	7.78E-5	1.87E-5	4.41E-4	1.52E-5	6.82E-5	1.39E-6	-1.58E-4	3.68E-4
EP-T	mol N eq	3.92E-3	8.57E-4	2.07E-4	4.99E-3	1.67E-4	7.51E-4	8.20E-6	-1.78E-3	4.13E-3
POCP	kg NMVOC eq	1.74E-3	2.45E-4	6.56E-5	2.05E-3	4.79E-5	2.35E-4	3.00E-6	-7.83E-4	1.55E-3
ADP-mm	kg Sb eq	2.27E-5	9.87E-7	5.32E-7	2.42E-5	1.93E-7	9.02E-7	2.02E-9	-2.45E-6	2.29E-5
ADP-f	MJ	1.78E+1	5.86E-1	4.01E-1	1.88E+1	1.14E-1	7.24E-1	6.21E-3	-9.28E+0	1.04E+1
WDP	m3 depriv.	3.69E-1	1.80E-3	9.18E-2	4.63E-1	3.51E-4	1.43E-2	3.32E-5	-1.58E-1	3.19E-1
PM	disease inc.	2.09E-8	3.44E-9	1.19E-9	2.55E-8	6.73E-10	3.77E-9	4.24E-11	-7.65E-9	2.23E-8
IR	kBq U-235 eq	1.31E-2	2.56E-3	3.91E-4	1.60E-2	5.00E-4	2.19E-3	2.86E-5	-4.62E-3	1.41E-2
ETP-fw	CTUe	4.10E+0	4.76E-1	4.81E-1	5.06E+0	9.29E-2	8.67E-1	5.43E-3	-1.48E+0	4.54E+0
HTP-c	CTUh	1.94E-10	1.69E-11	2.92E-11	2.40E-10	3.31E-12	9.90E-11	1.47E-13	-6.21E-11	2.81E-10
HTP-nc	CTUh	4.15E-9	5.67E-10	5.30E-10	5.25E-9	1.11E-10	1.22E-9	3.31E-12	-1.53E-9	5.05E-9
SQP	Pt	7.13E+0	5.01E-1	8.28E-2	7.71E+0	9.79E-2	5.78E-1	1.57E-2	-3.13E+0	5.28E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.22E+0	8.40E-3	8.92E-1	2.12E+0	1.64E-3	3.55E-2	2.27E-4	-5.86E-1	1.57E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.22E+0	8.40E-3	8.92E-1	2.12E+0	1.64E-3	3.55E-2	2.27E-4	-5.86E-1	1.57E+0
PENRE	MJ	1.91E+1	6.22E-1	4.38E-1	2.02E+1	1.21E-1	7.71E-1	6.59E-3	-1.00E+1	1.11E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.91E+1	6.22E-1	4.38E-1	2.02E+1	1.21E-1	7.71E-1	6.59E-3	-1.00E+1	1.11E+1
PET	MJ	2.03E+1	6.30E-1	1.33E+0	2.23E+1	1.23E-1	8.06E-1	6.81E-3	-1.06E+1	1.26E+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	6.05E-3	6.63E-5	2.18E-3	8.30E-3	1.29E-5	4.58E-4	7.62E-6	-2.41E-3	6.37E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.42E-6	1.50E-6	4.45E-7	5.37E-6	2.93E-7	1.20E-6	7.45E-9	-2.54E-6	4.33E-6
NHWD	kg	3.48E-2	3.63E-2	4.32E-3	7.54E-2	7.09E-3	3.67E-2	2.90E-2	-8.57E-3	1.40E-1
RWD	kg	1.32E-5	3.98E-6	4.75E-7	1.77E-5	7.78E-7	2.78E-6	4.07E-8	-4.31E-6	1.70E-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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