Environmental Profile

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

Ecochain v3.5.64

Product:	3010718 - ED Tech PP Pipe HTEM 75 L=1 S/PL
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	6.68E-1	5.58E-2	4.80E-2	7.72E-1	1.14E-2	4.33E-1	4.62E-3	-4.64E-1	7.57E-1
GWP-f	kg CO2 eq	7.78E-1	5.58E-2	4.29E-2	8.77E-1	1.14E-2	3.21E-1	4.62E-3	-4.63E-1	7.51E-1
GWP-b	kg CO2 eq	-1.10E-1	3.39E-5	2.71E-3	-1.07E-1	6.91E-6	1.12E-1	4.10E-6	-1.55E-3	3.68E-3
GWP-luluc	kg CO2 eq	2.81E-4	1.97E-5	2.44E-3	2.74E-3	4.03E-6	6.36E-5	8.48E-8	-1.33E-4	2.68E-3
ODP	kg CFC11 eq	2.31E-8	1.29E-8	4.67E-9	4.06E-8	2.62E-9	8.43E-9	1.29E-10	-1.90E-8	3.28E-8
AP	mol H+ eq	3.08E-3	3.18E-4	1.45E-4	3.55E-3	6.48E-5	3.52E-4	3.04E-6	-1.34E-3	2.62E-3
EP-fw	kg P eq	1.30E-5	4.59E-7	5.72E-7	1.40E-5	9.36E-8	1.84E-6	3.83E-9	-5.54E-6	1.04E-5
EP-m	kg N eq	4.97E-4	1.14E-4	2.76E-5	6.38E-4	2.32E-5	1.03E-4	1.99E-6	-2.47E-4	5.19E-4
EP-T	mol N eq	5.64E-3	1.25E-3	3.05E-4	7.20E-3	2.55E-4	1.13E-3	1.23E-5	-2.77E-3	5.83E-3
POCP	kg NMVOC eq	2.53E-3	3.58E-4	9.68E-5	2.99E-3	7.30E-5	3.56E-4	4.52E-6	-1.23E-3	2.19E-3
ADP-mm	kg Sb eq	2.22E-5	1.44E-6	7.85E-7	2.45E-5	2.94E-7	1.39E-6	3.04E-9	-3.48E-6	2.27E-5
ADP-f	MJ	2.69E+1	8.56E-1	5.92E-1	2.83E+1	1.75E-1	1.11E+0	9.35E-3	-1.43E+1	1.53E+1
WDP	m3 depriv.	5.46E-1	2.63E-3	1.36E-1	6.84E-1	5.36E-4	2.17E-2	4.81E-5	-2.46E-1	4.60E-1
PM	disease inc.	2.85E-8	5.04E-9	1.75E-9	3.53E-8	1.03E-9	5.79E-9	6.39E-11	-1.23E-8	2.99E-8
IR	kBq U-235 eq	1.71E-2	3.74E-3	5.77E-4	2.14E-2	7.63E-4	3.37E-3	4.31E-5	-7.26E-3	1.83E-2
ETP-fw	CTUe	5.38E+0	6.95E-1	7.10E-1	6.79E+0	1.42E-1	1.29E+0	7.86E-3	-2.27E+0	5.96E+0
HTP-c	CTUh	2.66E-10	2.47E-11	4.31E-11	3.34E-10	5.05E-12	1.49E-10	2.19E-13	-1.08E-10	3.81E-10
HTP-nc	CTUh	5.78E-9	8.29E-10	7.83E-10	7.39E-9	1.69E-10	1.85E-9	4.90E-12	-2.42E-9	7.00E-9
SQP	Pt	1.08E+1	7.33E-1	1.22E-1	1.16E+1	1.49E-1	8.91E-1	2.36E-2	-7.05E+0	5.64E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.82E+0	1.23E-2	1.32E+0	3.15E+0	2.50E-3	5.45E-2	3.41E-4	-1.20E+0	2.01E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.82E+0	1.23E-2	1.32E+0	3.15E+0	2.50E-3	5.45E-2	3.41E-4	-1.20E+0	2.01E+0
PENRE	MJ	2.88E+1	9.09E-1	6.46E-1	3.04E+1	1.85E-1	1.19E+0	9.92E-3	-1.54E+1	1.63E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.88E+1	9.09E-1	6.46E-1	3.04E+1	1.85E-1	1.19E+0	9.92E-3	-1.54E+1	1.63E+1
PET	MJ	3.06E+1	9.21E-1	1.96E+0	3.35E+1	1.88E-1	1.24E+0	1.03E-2	-1.66E+1	1.84E+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	8.65E-3	9.69E-5	3.22E-3	1.20E-2	1.98E-5	6.65E-4	1.15E-5	-3.77E-3	8.90E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.61E-6	2.19E-6	6.57E-7	7.46E-6	4.47E-7	1.83E-6	1.12E-8	-3.90E-6	5.84E-6
NHWD	kg	4.57E-2	5.31E-2	6.37E-3	1.05E-1	1.08E-2	5.53E-2	4.37E-2	-1.45E-2	2.00E-1
RWD	kg	1.63E-5	5.82E-6	7.01E-7	2.28E-5	1.19E-6	4.28E-6	6.13E-8	-6.76E-6	2.16E-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