Environmental Profile

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

Ecochain v3.5.64

Product:	3010720 - ED Tech PP Pipe HTEM 75 L=3 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	1.75E+0	1.54E-1	1.37E-1	2.04E+0	3.11E-2	1.19E+0	1.25E-2	-1.26E+0	2.01E+0
GWP-f	kg CO2 eq	2.09E+0	1.54E-1	1.22E-1	2.37E+0	3.11E-2	8.35E-1	1.25E-2	-1.25E+0	2.00E+0
GWP-b	kg CO2 eq	-3.46E-1	9.35E-5	7.73E-3	-3.38E-1	1.89E-5	3.53E-1	1.11E-5	-4.26E-3	1.12E-2
GWP-luluc	kg CO2 eq	7.58E-4	5.45E-5	6.96E-3	7.77E-3	1.10E-5	1.75E-4	2.29E-7	-3.67E-4	7.59E-3
ODP	kg CFC11 eq	5.24E-8	3.55E-8	1.33E-8	1.01E-7	7.16E-9	2.31E-8	3.50E-10	-5.01E-8	8.18E-8
AP	mol H+ eq	8.19E-3	8.77E-4	4.13E-4	9.48E-3	1.77E-4	9.66E-4	8.21E-6	-3.69E-3	6.94E-3
EP-fw	kg P eq	3.43E-5	1.27E-6	1.63E-6	3.72E-5	2.56E-7	5.05E-6	1.03E-8	-1.52E-5	2.74E-5
EP-m	kg N eq	1.33E-3	3.14E-4	7.88E-5	1.73E-3	6.33E-5	2.82E-4	5.21E-6	-6.78E-4	1.40E-3
EP-T	mol N eq	1.52E-2	3.46E-3	8.70E-4	1.95E-2	6.98E-4	3.10E-3	3.34E-5	-7.63E-3	1.57E-2
POCP	kg NMVOC eq	6.77E-3	9.88E-4	2.76E-4	8.03E-3	1.99E-4	9.79E-4	1.22E-5	-3.37E-3	5.85E-3
ADP-mm	kg Sb eq	4.28E-5	3.98E-6	2.24E-6	4.90E-5	8.04E-7	3.82E-6	8.21E-9	-8.95E-6	4.47E-5
ADP-f	MJ	7.25E+1	2.36E+0	1.69E+0	7.66E+1	4.77E-1	3.06E+0	2.53E-2	-3.89E+1	4.12E+1
WDP	m3 depriv.	1.47E+0	7.25E-3	3.87E-1	1.86E+0	1.46E-3	5.93E-2	1.29E-4	-6.75E-1	1.25E+0
PM	disease inc.	7.72E-8	1.39E-8	5.00E-9	9.60E-8	2.80E-9	1.59E-8	1.73E-10	-3.38E-8	8.12E-8
IR	kBq U-235 eq	4.31E-2	1.03E-2	1.64E-3	5.51E-2	2.08E-3	9.26E-3	1.16E-4	-1.97E-2	4.68E-2
ETP-fw	CTUe	1.39E+1	1.92E+0	2.03E+0	1.78E+1	3.87E-1	3.46E+0	2.07E-2	-6.36E+0	1.53E+1
HTP-c	CTUh	7.16E-10	6.83E-11	1.23E-10	9.07E-10	1.38E-11	4.13E-10	5.91E-13	-2.95E-10	1.04E-9
HTP-nc	CTUh	1.54E-8	2.29E-9	2.23E-9	1.99E-8	4.62E-10	5.07E-9	1.31E-11	-6.68E-9	1.88E-8
SQP	Pt	3.35E+1	2.02E+0	3.49E-1	3.58E+1	4.08E-1	2.45E+0	6.40E-2	-1.99E+1	1.89E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.56E+0	3.39E-2	3.76E+0	9.35E+0	6.84E-3	1.50E-1	9.18E-4	-3.42E+0	6.09E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.56E+0	3.39E-2	3.76E+0	9.35E+0	6.84E-3	1.50E-1	9.18E-4	-3.42E+0	6.09E+0
PENRE	MJ	7.78E+1	2.51E+0	1.84E+0	8.22E+1	5.06E-1	3.26E+0	2.68E-2	-4.19E+1	4.40E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.78E+1	2.51E+0	1.84E+0	8.22E+1	5.06E-1	3.26E+0	2.68E-2	-4.19E+1	4.40E+1
PET	MJ	8.34E+1	2.54E+0	5.60E+0	9.15E+1	5.13E-1	3.41E+0	2.78E-2	-4.54E+1	5.01E+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	2.30E-2	2.67E-4	9.20E-3	3.24E-2	5.40E-5	1.77E-3	3.11E-5	-1.03E-2	2.40E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.22E-5	6.04E-6	1.87E-6	2.01E-5	1.22E-6	4.99E-6	3.03E-8	-1.03E-5	1.60E-5
NHWD	kg	1.21E-1	1.46E-1	1.82E-2	2.86E-1	2.96E-2	1.52E-1	1.19E-1	-3.98E-2	5.46E-1
RWD	kg	3.96E-5	1.61E-5	2.00E-6	5.77E-5	3.24E-6	1.18E-5	1.66E-7	-1.83E-5	5.46E-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