Environmental Profile

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

Ecochain v3.5.64

Product:	3018464 - ED Tech PP Pipe HTEM 75 L=0,25 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	2.21E-1	1.77E-2	1.47E-2	2.54E-1	3.45E-3	1.87E-1	1.44E-3	-1.35E-1	3.10E-1
GWP-f	kg CO2 eq	2.79E-1	1.76E-2	1.31E-2	3.10E-1	3.45E-3	1.16E-1	1.44E-3	-1.63E-1	2.68E-1
GWP-b	kg CO2 eq	-5.80E-2	1.07E-5	8.29E-4	-5.71E-2	2.10E-6	7.11E-2	1.28E-6	2.77E-2	4.17E-2
GWP-luluc	kg CO2 eq	2.71E-4	6.25E-6	7.46E-4	1.02E-3	1.22E-6	1.97E-5	2.68E-8	-2.50E-4	7.93E-4
ODP	kg CFC11 eq	1.56E-8	4.07E-9	1.43E-9	2.11E-8	7.95E-10	2.95E-9	4.03E-11	-8.99E-9	1.59E-8
AP	mol H+ eq	1.23E-3	1.01E-4	4.42E-5	1.37E-3	1.97E-5	1.21E-4	9.51E-7	-5.61E-4	9.55E-4
EP-fw	kg P eq	6.53E-6	1.45E-7	1.75E-7	6.85E-6	2.84E-8	5.80E-7	1.21E-9	-4.29E-6	3.17E-6
EP-m	kg N eq	2.20E-4	3.60E-5	8.45E-6	2.65E-4	7.03E-6	3.67E-5	6.87E-7	-1.12E-4	1.97E-4
EP-T	mol N eq	2.41E-3	3.96E-4	9.33E-5	2.90E-3	7.75E-5	4.03E-4	3.85E-6	-1.27E-3	2.12E-3
POCP	kg NMVOC eq	9.70E-4	1.13E-4	2.96E-5	1.11E-3	2.22E-5	1.25E-4	1.41E-6	-4.88E-4	7.74E-4
ADP-mm	kg Sb eq	1.46E-5	4.57E-7	2.40E-7	1.53E-5	8.93E-8	4.75E-7	9.51E-10	-1.53E-6	1.44E-5
ADP-f	MJ	8.86E+0	2.71E-1	1.81E-1	9.31E+0	5.30E-2	3.60E-1	2.92E-3	-4.66E+0	5.06E+0
WDP	m3 depriv.	1.85E-1	8.31E-4	4.14E-2	2.28E-1	1.63E-4	6.87E-3	1.58E-5	-1.14E-1	1.20E-1
PM	disease inc.	1.24E-8	1.59E-9	5.36E-10	1.45E-8	3.12E-10	1.94E-9	1.99E-11	-6.84E-9	9.94E-9
IR	kBq U-235 eq	8.22E-3	1.18E-3	1.76E-4	9.58E-3	2.32E-4	1.13E-3	1.35E-5	-4.17E-3	6.79E-3
ETP-fw	CTUe	5.69E+0	2.20E-1	2.17E-1	6.12E+0	4.30E-2	4.64E-1	2.66E-3	-2.92E+0	3.72E+0
HTP-c	CTUh	1.22E-10	7.83E-12	1.32E-11	1.43E-10	1.53E-12	4.88E-11	6.95E-14	-6.02E-11	1.33E-10
HTP-nc	CTUh	2.51E-9	2.62E-10	2.39E-10	3.01E-9	5.13E-11	6.09E-10	1.59E-12	-1.37E-9	2.30E-9
SQP	Pt	6.54E+0	2.32E-1	3.74E-2	6.80E+0	4.53E-2	2.81E-1	7.37E-3	-9.30E+0	-2.17E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.10E+0	3.89E-3	4.03E-1	1.50E+0	7.60E-4	1.71E-2	1.07E-4	-1.59E+0	-6.81E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.10E+0	3.89E-3	4.03E-1	1.50E+0	7.60E-4	1.71E-2	1.07E-4	-1.59E+0	-6.81E-2
PENRE	MJ	9.50E+0	2.88E-1	1.98E-1	9.98E+0	5.62E-2	3.83E-1	3.10E-3	-5.02E+0	5.41E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.50E+0	2.88E-1	1.98E-1	9.98E+0	5.62E-2	3.83E-1	3.10E-3	-5.02E+0	5.41E+0
PET	MJ	1.06E+1	2.91E-1	6.00E-1	1.15E+1	5.70E-2	4.00E-1	3.20E-3	-6.61E+0	5.34E+0
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	3.31E-3	3.07E-5	9.86E-4	4.33E-3	6.00E-6	2.31E-4	3.58E-6	-2.21E-3	2.35E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.43E-6	6.93E-7	2.01E-7	3.32E-6	1.35E-7	6.31E-7	3.50E-9	-1.82E-6	2.27E-6
NHWD	kg	2.33E-2	1.68E-2	1.95E-3	4.20E-2	3.28E-3	1.79E-2	1.36E-2	-7.78E-3	6.90E-2
RWD	kg	8.69E-6	1.84E-6	2.14E-7	1.07E-5	3.60E-7	1.45E-6	1.91E-8	-4.00E-6	8.57E-6
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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