Environmental Profile

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

Ecochain v3.5.64

Product:	3010750 - ED Tech PP Pipe HTDM 75 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	7.69E-1	5.93E-2	5.16E-2	8.80E-1	1.23E-2	4.50E-1	5.03E-3	-5.01E-1	8.47E-1
GWP-f	kg CO2 eq	8.50E-1	5.93E-2	4.61E-2	9.55E-1	1.22E-2	3.67E-1	5.04E-3	-5.00E-1	8.40E-1
GWP-b	kg CO2 eq	-8.10E-2	3.60E-5	2.91E-3	-7.80E-2	7.44E-6	8.32E-2	4.48E-6	-1.64E-3	3.50E-3
GWP-luluc	kg CO2 eq	3.00E-4	2.10E-5	2.62E-3	2.94E-3	4.33E-6	6.79E-5	9.24E-8	-1.26E-4	2.89E-3
ODP	kg CFC11 eq	3.00E-8	1.37E-8	5.02E-9	4.87E-8	2.82E-9	9.01E-9	1.41E-10	-2.09E-8	3.97E-8
AP	mol H+ eq	3.38E-3	3.38E-4	1.55E-4	3.88E-3	6.98E-5	3.78E-4	3.31E-6	-1.41E-3	2.91E-3
EP-fw	kg P eq	1.44E-5	4.88E-7	6.15E-7	1.55E-5	1.01E-7	1.96E-6	4.18E-9	-5.73E-6	1.19E-5
EP-m	kg N eq	5.43E-4	1.21E-4	2.97E-5	6.93E-4	2.50E-5	1.10E-4	2.26E-6	-2.58E-4	5.73E-4
EP-T	mol N eq	6.16E-3	1.33E-3	3.28E-4	7.82E-3	2.75E-4	1.21E-3	1.34E-5	-2.88E-3	6.44E-3
POCP	kg NMVOC eq	2.77E-3	3.81E-4	1.04E-4	3.26E-3	7.86E-5	3.82E-4	4.93E-6	-1.29E-3	2.44E-3
ADP-mm	kg Sb eq	3.35E-5	1.53E-6	8.43E-7	3.58E-5	3.17E-7	1.48E-6	3.31E-9	-3.97E-6	3.37E-5
ADP-f	MJ	2.93E+1	9.10E-1	6.35E-1	3.09E+1	1.88E-1	1.19E+0	1.02E-2	-1.54E+1	1.69E+1
WDP	m3 depriv.	5.96E-1	2.79E-3	1.46E-1	7.45E-1	5.77E-4	2.35E-2	5.18E-5	-2.62E-1	5.06E-1
PM	disease inc.	3.13E-8	5.35E-9	1.88E-9	3.85E-8	1.11E-9	6.17E-9	6.95E-11	-1.25E-8	3.34E-8
IR	kBq U-235 eq	2.02E-2	3.98E-3	6.19E-4	2.48E-2	8.22E-4	3.59E-3	4.70E-5	-7.64E-3	2.16E-2
ETP-fw	CTUe	6.13E+0	7.39E-1	7.63E-1	7.63E+0	1.53E-1	1.41E+0	8.83E-3	-2.30E+0	6.90E+0
HTP-c	CTUh	2.79E-10	2.63E-11	4.63E-11	3.52E-10	5.43E-12	1.59E-10	2.39E-13	-1.04E-10	4.13E-10
HTP-nc	CTUh	6.34E-9	8.81E-10	8.41E-10	8.06E-9	1.82E-10	1.99E-9	5.41E-12	-2.49E-9	7.75E-9
SQP	Pt	8.58E+0	7.79E-1	1.31E-1	9.49E+0	1.61E-1	9.50E-1	2.57E-2	-5.05E+0	5.57E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.52E+0	1.31E-2	1.41E+0	2.95E+0	2.70E-3	5.83E-2	3.74E-4	-9.07E-1	2.11E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.52E+0	1.31E-2	1.41E+0	2.95E+0	2.70E-3	5.83E-2	3.74E-4	-9.07E-1	2.11E+0
PENRE	MJ	3.14E+1	9.66E-1	6.94E-1	3.31E+1	2.00E-1	1.27E+0	1.08E-2	-1.66E+1	1.80E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.14E+1	9.66E-1	6.94E-1	3.31E+1	2.00E-1	1.27E+0	1.08E-2	-1.66E+1	1.80E+1
PET	MJ	3.30E+1	9.79E-1	2.11E+0	3.60E+1	2.02E-1	1.32E+0	1.12E-2	-1.75E+1	2.01E+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	9.57E-3	1.03E-4	3.46E-3	1.31E-2	2.13E-5	7.40E-4	1.25E-5	-4.00E-3	9.91E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.09E-6	2.33E-6	7.06E-7	8.12E-6	4.81E-7	1.96E-6	1.22E-8	-4.18E-6	6.40E-6
NHWD	kg	4.89E-2	5.64E-2	6.85E-3	1.12E-1	1.17E-2	5.94E-2	4.75E-2	-1.42E-2	2.16E-1
RWD	kg	2.01E-5	6.19E-6	7.53E-7	2.70E-5	1.28E-6	4.56E-6	6.67E-8	-7.11E-6	2.58E-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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