Environmental Profile

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

Ecochain v3.5.64

Product:	3010752 - ED Tech PP Pipe HTDM 75 L=3 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	1.88E+0	1.57E-1	1.41E-1	2.18E+0	3.19E-2	1.17E+0	1.29E-2	-1.29E+0	2.10E+0
GWP-f	kg CO2 eq	2.16E+0	1.57E-1	1.25E-1	2.44E+0	3.19E-2	8.80E-1	1.29E-2	-1.28E+0	2.08E+0
GWP-b	kg CO2 eq	-2.78E-1	9.52E-5	7.94E-3	-2.70E-1	1.94E-5	2.85E-1	1.14E-5	-4.35E-3	1.10E-2
GWP-luluc	kg CO2 eq	7.56E-4	5.55E-5	7.14E-3	7.95E-3	1.13E-5	1.79E-4	2.36E-7	-3.41E-4	7.80E-3
ODP	kg CFC11 eq	5.85E-8	3.61E-8	1.37E-8	1.08E-7	7.35E-9	2.36E-8	3.61E-10	-5.13E-8	8.84E-8
AP	mol H+ eq	8.45E-3	8.93E-4	4.23E-4	9.76E-3	1.82E-4	9.89E-4	8.48E-6	-3.72E-3	7.22E-3
EP-fw	kg P eq	3.54E-5	1.29E-6	1.67E-6	3.84E-5	2.63E-7	5.17E-6	1.07E-8	-1.51E-5	2.87E-5
EP-m	kg N eq	1.37E-3	3.20E-4	8.09E-5	1.77E-3	6.50E-5	2.89E-4	5.47E-6	-6.79E-4	1.45E-3
EP-T	mol N eq	1.56E-2	3.52E-3	8.93E-4	2.00E-2	7.17E-4	3.18E-3	3.45E-5	-7.63E-3	1.63E-2
POCP	kg NMVOC eq	6.96E-3	1.01E-3	2.83E-4	8.25E-3	2.05E-4	1.00E-3	1.26E-5	-3.39E-3	6.08E-3
ADP-mm	kg Sb eq	5.39E-5	4.06E-6	2.30E-6	6.03E-5	8.26E-7	3.90E-6	8.48E-9	-9.34E-6	5.57E-5
ADP-f	MJ	7.48E+1	2.41E+0	1.73E+0	7.89E+1	4.90E-1	3.13E+0	2.61E-2	-3.98E+1	4.27E+1
WDP	m3 depriv.	1.52E+0	7.39E-3	3.97E-1	1.92E+0	1.50E-3	6.09E-2	1.33E-4	-6.89E-1	1.29E+0
PM	disease inc.	7.91E-8	1.42E-8	5.13E-9	9.84E-8	2.88E-9	1.63E-8	1.78E-10	-3.33E-8	8.44E-8
IR	kBq U-235 eq	4.58E-2	1.05E-2	1.69E-3	5.81E-2	2.14E-3	9.46E-3	1.20E-4	-1.98E-2	4.99E-2
ETP-fw	CTUe	1.45E+1	1.95E+0	2.08E+0	1.85E+1	3.98E-1	3.58E+0	2.17E-2	-6.24E+0	1.63E+1
HTP-c	CTUh	7.12E-10	6.96E-11	1.26E-10	9.08E-10	1.42E-11	4.22E-10	6.10E-13	-2.77E-10	1.07E-9
HTP-nc	CTUh	1.58E-8	2.33E-9	2.29E-9	2.04E-8	4.74E-10	5.20E-9	1.36E-11	-6.62E-9	1.95E-8
SQP	Pt	2.80E+1	2.06E+0	3.58E-1	3.04E+1	4.19E-1	2.50E+0	6.60E-2	-1.52E+1	1.83E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.79E+0	3.45E-2	3.85E+0	8.68E+0	7.03E-3	1.53E-1	9.50E-4	-2.72E+0	6.12E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.79E+0	3.45E-2	3.85E+0	8.68E+0	7.03E-3	1.53E-1	9.50E-4	-2.72E+0	6.12E+0
PENRE	MJ	8.02E+1	2.56E+0	1.89E+0	8.47E+1	5.20E-1	3.33E+0	2.77E-2	-4.29E+1	4.56E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.02E+1	2.56E+0	1.89E+0	8.47E+1	5.20E-1	3.33E+0	2.77E-2	-4.29E+1	4.56E+1
PET	MJ	8.50E+1	2.59E+0	5.74E+0	9.34E+1	5.27E-1	3.48E+0	2.87E-2	-4.57E+1	5.18E+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	2.38E-2	2.72E-4	9.43E-3	3.35E-2	5.54E-5	1.84E-3	3.21E-5	-1.05E-2	2.50E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.24E-5	6.16E-6	1.92E-6	2.05E-5	1.25E-6	5.12E-6	3.13E-8	-1.04E-5	1.65E-5
NHWD	kg	1.23E-1	1.49E-1	1.87E-2	2.90E-1	3.04E-2	1.56E-1	1.22E-1	-3.79E-2	5.61E-1
RWD	kg	4.29E-5	1.64E-5	2.05E-6	6.14E-5	3.33E-6	1.20E-5	1.71E-7	-1.83E-5	5.86E-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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