Environmental Profile

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

Ecochain v3.5.64

Product:	3010751 - ED Tech PP Pipe HTDM 75 L=2 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	1.37E+0	1.09E-1	9.61E-2	1.57E+0	2.23E-2	7.84E-1	9.07E-3	-9.04E-1	1.48E+0
GWP-f	kg CO2 eq	1.52E+0	1.09E-1	8.58E-2	1.71E+0	2.23E-2	6.30E-1	9.07E-3	-9.01E-1	1.47E+0
GWP-b	kg CO2 eq	-1.49E-1	6.62E-5	5.42E-3	-1.43E-1	1.36E-5	1.54E-1	8.05E-6	-3.03E-3	7.33E-3
GWP-luluc	kg CO2 eq	5.15E-4	3.86E-5	4.88E-3	5.43E-3	7.90E-6	1.25E-4	1.66E-7	-2.33E-4	5.33E-3
ODP	kg CFC11 eq	4.41E-8	2.51E-8	9.34E-9	7.86E-8	5.15E-9	1.65E-8	2.54E-10	-3.64E-8	6.41E-8
AP	mol H+ eq	5.99E-3	6.21E-4	2.89E-4	6.90E-3	1.27E-4	6.88E-4	5.96E-6	-2.58E-3	5.14E-3
EP-fw	kg P eq	2.50E-5	8.98E-7	1.14E-6	2.71E-5	1.84E-7	3.60E-6	7.52E-9	-1.05E-5	2.04E-5
EP-m	kg N eq	9.57E-4	2.22E-4	5.53E-5	1.23E-3	4.55E-5	2.00E-4	3.91E-6	-4.70E-4	1.01E-3
EP-T	mol N eq	1.09E-2	2.45E-3	6.10E-4	1.39E-2	5.02E-4	2.20E-3	2.42E-5	-5.25E-3	1.14E-2
POCP	kg NMVOC eq	4.89E-3	7.00E-4	1.94E-4	5.79E-3	1.43E-4	6.95E-4	8.88E-6	-2.36E-3	4.28E-3
ADP-mm	kg Sb eq	4.38E-5	2.82E-6	1.57E-6	4.82E-5	5.78E-7	2.72E-6	5.96E-9	-6.72E-6	4.47E-5
ADP-f	MJ	5.26E+1	1.67E+0	1.18E+0	5.54E+1	3.43E-1	2.18E+0	1.84E-2	-2.79E+1	3.01E+1
WDP	m3 depriv.	1.07E+0	5.14E-3	2.71E-1	1.34E+0	1.05E-3	4.26E-2	9.37E-5	-4.81E-1	9.07E-1
PM	disease inc.	5.41E-8	9.85E-9	3.51E-9	6.75E-8	2.02E-9	1.13E-8	1.25E-10	-2.30E-8	5.80E-8
IR	kBq U-235 eq	3.31E-2	7.32E-3	1.15E-3	4.15E-2	1.50E-3	6.58E-3	8.46E-5	-1.39E-2	3.58E-2
ETP-fw	CTUe	1.03E+1	1.36E+0	1.42E+0	1.31E+1	2.78E-1	2.52E+0	1.54E-2	-4.19E+0	1.17E+1
HTP-c	CTUh	4.95E-10	4.84E-11	8.63E-11	6.30E-10	9.90E-12	2.91E-10	4.30E-13	-1.91E-10	7.40E-10
HTP-nc	CTUh	1.11E-8	1.62E-9	1.57E-9	1.43E-8	3.32E-10	3.63E-9	9.63E-12	-4.56E-9	1.37E-8
SQP	Pt	1.55E+1	1.43E+0	2.45E-1	1.72E+1	2.93E-1	1.74E+0	4.64E-2	-9.78E+0	9.51E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.75E+0	2.40E-2	2.63E+0	5.41E+0	4.92E-3	1.07E-1	6.69E-4	-1.73E+0	3.79E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.75E+0	2.40E-2	2.63E+0	5.41E+0	4.92E-3	1.07E-1	6.69E-4	-1.73E+0	3.79E+0
PENRE	MJ	5.64E+1	1.78E+0	1.29E+0	5.95E+1	3.64E-1	2.32E+0	1.95E-2	-3.01E+1	3.21E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.64E+1	1.78E+0	1.29E+0	5.95E+1	3.64E-1	2.32E+0	1.95E-2	-3.01E+1	3.21E+1
PET	MJ	5.92E+1	1.80E+0	3.93E+0	6.49E+1	3.69E-1	2.43E+0	2.01E-2	-3.18E+1	3.59E+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	1.69E-2	1.89E-4	6.45E-3	2.35E-2	3.88E-5	1.30E-3	2.25E-5	-7.33E-3	1.76E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.61E-6	4.28E-6	1.31E-6	1.42E-5	8.77E-7	3.57E-6	2.20E-8	-7.36E-6	1.13E-5
NHWD	kg	8.68E-2	1.04E-1	1.27E-2	2.03E-1	2.12E-2	1.08E-1	8.59E-2	-2.62E-2	3.92E-1
RWD	kg	3.15E-5	1.14E-5	1.40E-6	4.43E-5	2.33E-6	8.36E-6	1.20E-7	-1.28E-5	4.23E-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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