Environmental Profile

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

Ecochain v3.5.64

Product:	3010763 - ED Tech PP Pipe HTDM 125 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	3.01E+0	2.40E-1	2.18E-1	3.47E+0	4.99E-2	1.85E+0	2.03E-2	-2.03E+0	3.35E+0
GWP-f	kg CO2 eq	3.41E+0	2.40E-1	1.95E-1	3.85E+0	4.98E-2	1.43E+0	2.03E-2	-2.02E+0	3.33E+0
GWP-b	kg CO2 eq	-4.04E-1	1.46E-4	1.23E-2	-3.91E-1	3.03E-5	4.14E-1	1.80E-5	-6.72E-3	1.59E-2
GWP-luluc	kg CO2 eq	1.21E-3	8.48E-5	1.11E-2	1.24E-2	1.76E-5	2.78E-4	3.72E-7	-5.46E-4	1.21E-2
ODP	kg CFC11 eq	1.07E-7	5.52E-8	2.12E-8	1.83E-7	1.15E-8	3.68E-8	5.68E-10	-8.34E-8	1.48E-7
AP	mol H+ eq	1.35E-2	1.37E-3	6.56E-4	1.55E-2	2.84E-4	1.54E-3	1.33E-5	-5.81E-3	1.15E-2
EP-fw	kg P eq	5.70E-5	1.97E-6	2.60E-6	6.16E-5	4.10E-7	8.03E-6	1.68E-8	-2.38E-5	4.63E-5
EP-m	kg N eq	2.17E-3	4.89E-4	1.25E-4	2.79E-3	1.02E-4	4.49E-4	8.86E-6	-1.06E-3	2.28E-3
EP-T	mol N eq	2.47E-2	5.38E-3	1.38E-3	3.14E-2	1.12E-3	4.94E-3	5.42E-5	-1.19E-2	2.56E-2
POCP	kg NMVOC eq	1.11E-2	1.54E-3	4.39E-4	1.31E-2	3.20E-4	1.56E-3	1.99E-5	-5.31E-3	9.66E-3
ADP-mm	kg Sb eq	1.10E-4	6.20E-6	3.56E-6	1.20E-4	1.29E-6	6.07E-6	1.33E-8	-1.55E-5	1.11E-4
ADP-f	MJ	1.18E+2	3.68E+0	2.68E+0	1.24E+2	7.65E-1	4.86E+0	4.11E-2	-6.24E+1	6.76E+1
WDP	m3 depriv.	2.39E+0	1.13E-2	6.15E-1	3.02E+0	2.35E-3	9.54E-2	2.08E-4	-1.07E+0	2.05E+0
PM	disease inc.	1.24E-7	2.16E-8	7.96E-9	1.54E-7	4.50E-9	2.53E-8	2.81E-10	-5.22E-8	1.32E-7
IR	kBq U-235 eq	7.67E-2	1.61E-2	2.62E-3	9.54E-2	3.34E-3	1.47E-2	1.89E-4	-3.14E-2	8.23E-2
ETP-fw	CTUe	2.37E+1	2.99E+0	3.22E+0	2.99E+1	6.21E-1	5.67E+0	3.49E-2	-9.62E+0	2.66E+1
HTP-c	CTUh	1.13E-9	1.06E-10	1.96E-10	1.44E-9	2.21E-11	6.50E-10	9.61E-13	-4.47E-10	1.66E-9
HTP-nc	CTUh	2.52E-8	3.56E-9	3.55E-9	3.23E-8	7.41E-10	8.11E-9	2.16E-11	-1.03E-8	3.08E-8
SQP	Pt	4.08E+1	3.15E+0	5.55E-1	4.45E+1	6.55E-1	3.89E+0	1.04E-1	-2.58E+1	2.34E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.04E+0	5.28E-2	5.98E+0	1.31E+1	1.10E-2	2.38E-1	1.50E-3	-4.48E+0	8.84E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.04E+0	5.28E-2	5.98E+0	1.31E+1	1.10E-2	2.38E-1	1.50E-3	-4.48E+0	8.84E+0
PENRE	MJ	1.27E+2	3.91E+0	2.93E+0	1.33E+2	8.12E-1	5.18E+0	4.36E-2	-6.73E+1	7.22E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.27E+2	3.91E+0	2.93E+0	1.33E+2	8.12E-1	5.18E+0	4.36E-2	-6.73E+1	7.22E+1
PET	MJ	1.34E+2	3.96E+0	8.91E+0	1.47E+2	8.23E-1	5.42E+0	4.51E-2	-7.18E+1	8.10E+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	3.80E-2	4.16E-4	1.46E-2	5.30E-2	8.66E-5	2.94E-3	5.05E-5	-1.64E-2	3.97E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.01E-5	9.41E-6	2.98E-6	3.25E-5	1.96E-6	7.99E-6	4.92E-8	-1.69E-5	2.56E-5
NHWD	kg	1.96E-1	2.28E-1	2.89E-2	4.53E-1	4.74E-2	2.42E-1	1.92E-1	-6.06E-2	8.74E-1
RWD	kg	7.43E-5	2.50E-5	3.18E-6	1.02E-4	5.20E-6	1.87E-5	2.69E-7	-2.91E-5	9.75E-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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