Environmental Profile

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

Ecochain v3.5.64

Product:	3080362 - ED Tech PP Pipe HTEM 40 L=0,5 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	2.12E-1	1.64E-2	1.35E-2	2.42E-1	3.43E-3	1.32E-1	1.40E-3	-1.39E-1	2.39E-1
GWP-f	kg CO2 eq	2.39E-1	1.64E-2	1.20E-2	2.67E-1	3.42E-3	1.03E-1	1.40E-3	-1.39E-1	2.36E-1
GWP-b	kg CO2 eq	-2.76E-2	9.94E-6	7.61E-4	-2.68E-2	2.08E-6	2.82E-2	1.25E-6	-4.54E-4	9.01E-4
GWP-luluc	kg CO2 eq	1.52E-3	5.79E-6	6.85E-4	2.21E-3	1.21E-6	1.90E-5	2.64E-8	-3.50E-5	2.19E-3
ODP	kg CFC11 eq	9.20E-9	3.77E-9	1.31E-9	1.43E-8	7.89E-10	2.52E-9	3.94E-11	-5.83E-9	1.18E-8
AP	mol H+ eq	1.01E-3	9.32E-5	4.06E-5	1.14E-3	1.95E-5	1.06E-4	9.29E-7	-3.94E-4	8.77E-4
EP-fw	kg P eq	4.32E-6	1.35E-7	1.61E-7	4.61E-6	2.82E-8	5.49E-7	1.19E-9	-1.59E-6	3.60E-6
EP-m	kg N eq	1.68E-4	3.34E-5	7.76E-6	2.09E-4	6.98E-6	3.10E-5	6.31E-7	-7.19E-5	1.76E-4
EP-T	mol N eq	1.81E-3	3.68E-4	8.56E-5	2.26E-3	7.69E-5	3.41E-4	3.77E-6	-8.06E-4	1.87E-3
POCP	kg NMVOC eq	7.89E-4	1.05E-4	2.72E-5	9.21E-4	2.20E-5	1.07E-4	1.38E-6	-3.59E-4	6.93E-4
ADP-mm	kg Sb eq	9.95E-6	4.23E-7	2.20E-7	1.06E-5	8.86E-8	4.14E-7	9.33E-10	-1.12E-6	9.98E-6
ADP-f	MJ	8.09E+0	2.51E-1	1.66E-1	8.51E+0	5.26E-2	3.32E-1	2.85E-3	-4.27E+0	4.63E+0
WDP	m3 depriv.	1.71E-1	7.71E-4	3.80E-2	2.09E-1	1.61E-4	6.56E-3	1.65E-5	-7.29E-2	1.43E-1
PM	disease inc.	9.31E-9	1.48E-9	4.92E-10	1.13E-8	3.09E-10	1.73E-9	1.95E-11	-3.49E-9	9.85E-9
IR	kBq U-235 eq	5.86E-3	1.10E-3	1.62E-4	7.12E-3	2.30E-4	1.00E-3	1.31E-5	-2.13E-3	6.24E-3
ETP-fw	CTUe	1.96E+0	2.04E-1	1.99E-1	2.36E+0	4.27E-2	3.96E-1	2.48E-3	-6.53E-1	2.15E+0
HTP-c	CTUh	9.03E-11	7.26E-12	1.21E-11	1.10E-10	1.52E-12	4.57E-11	6.84E-14	-2.87E-11	1.28E-10
HTP-nc	CTUh	1.95E-9	2.43E-10	2.20E-10	2.42E-9	5.09E-11	5.60E-10	1.53E-12	-6.96E-10	2.33E-9
SQP	Pt	2.78E+0	2.15E-1	3.43E-2	3.02E+0	4.50E-2	2.65E-1	7.20E-3	-1.41E+0	1.94E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.87E-1	3.60E-3	3.70E-1	8.60E-1	7.54E-4	1.63E-2	1.03E-4	-2.56E-1	6.21E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.87E-1	3.60E-3	3.70E-1	8.60E-1	7.54E-4	1.63E-2	1.03E-4	-2.56E-1	6.21E-1
PENRE	MJ	8.68E+0	2.67E-1	1.81E-1	9.13E+0	5.58E-2	3.54E-1	3.03E-3	-4.60E+0	4.94E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.68E+0	2.67E-1	1.81E-1	9.13E+0	5.58E-2	3.54E-1	3.03E-3	-4.60E+0	4.94E+0
PET	MJ	9.17E+0	2.70E-1	5.51E-1	9.99E+0	5.66E-2	3.70E-1	3.13E-3	-4.86E+0	5.56E+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	2.87E-3	2.84E-5	9.05E-4	3.81E-3	5.95E-6	2.08E-4	3.49E-6	-1.11E-3	2.91E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.52E-6	6.42E-7	1.84E-7	2.35E-6	1.34E-7	5.51E-7	3.43E-9	-1.16E-6	1.88E-6
NHWD	kg	1.60E-2	1.56E-2	1.79E-3	3.34E-2	3.26E-3	1.67E-2	1.33E-2	-3.94E-3	6.27E-2
RWD	kg	5.89E-6	1.71E-6	1.97E-7	7.79E-6	3.57E-7	1.27E-6	1.87E-8	-1.98E-6	7.46E-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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