Environmental Profile

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

Ecochain v3.5.64

Product:	3010957 - Ed Tech Branch Reduced HTEA 45° 75x50
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	2.35E-1	1.54E-2	1.53E-2	2.66E-1	2.94E-3	1.79E-1	1.47E-3	-1.41E-1	3.09E-1
GWP-f	kg CO2 eq	2.79E-1	1.54E-2	1.31E-2	3.07E-1	2.94E-3	1.26E-1	1.47E-3	-1.60E-1	2.78E-1
GWP-b	kg CO2 eq	-4.38E-2	9.35E-6	1.11E-3	-4.27E-2	1.79E-6	5.28E-2	1.30E-6	1.96E-2	2.97E-2
GWP-luluc	kg CO2 eq	2.28E-4	5.45E-6	1.11E-3	1.34E-3	1.04E-6	1.62E-5	2.60E-8	-1.86E-4	1.17E-3
ODP	kg CFC11 eq	1.85E-8	3.55E-9	1.31E-9	2.34E-8	6.78E-10	2.42E-9	3.74E-11	-8.91E-9	1.76E-8
AP	mol H+ eq	1.16E-3	8.77E-5	5.28E-5	1.30E-3	1.68E-5	1.02E-4	8.99E-7	-5.06E-4	9.19E-4
EP-fw	kg P eq	6.24E-6	1.27E-7	2.04E-7	6.57E-6	2.42E-8	4.78E-7	1.19E-9	-3.46E-6	3.61E-6
EP-m	kg N eq	2.11E-4	3.14E-5	8.92E-6	2.51E-4	5.99E-6	3.12E-5	7.43E-7	-9.97E-5	1.89E-4
EP-T	mol N eq	2.34E-3	3.46E-4	1.00E-4	2.79E-3	6.60E-5	3.43E-4	3.63E-6	-1.12E-3	2.08E-3
POCP	kg NMVOC eq	9.74E-4	9.89E-5	3.12E-5	1.10E-3	1.89E-5	1.06E-4	1.36E-6	-4.46E-4	7.84E-4
ADP-mm	kg Sb eq	2.19E-5	3.98E-7	3.19E-7	2.26E-5	7.61E-8	3.87E-7	9.06E-10	-1.67E-6	2.14E-5
ADP-f	MJ	8.99E+0	2.36E-1	1.72E-1	9.39E+0	4.51E-2	2.95E-1	2.73E-3	-4.57E+0	5.17E+0
WDP	m3 depriv.	1.84E-1	7.25E-4	6.10E-2	2.46E-1	1.39E-4	5.93E-3	1.54E-5	-1.00E-1	1.51E-1
PM	disease inc.	1.23E-8	1.39E-9	5.29E-10	1.42E-8	2.65E-10	1.58E-9	1.88E-11	-5.76E-9	1.03E-8
IR	kBq U-235 eq	9.10E-3	1.03E-3	1.61E-4	1.03E-2	1.97E-4	9.18E-4	1.27E-5	-3.59E-3	7.83E-3
ETP-fw	CTUe	4.85E+0	1.92E-1	2.72E-1	5.31E+0	3.67E-2	4.15E-1	2.79E-3	-2.22E+0	3.54E+0
HTP-c	CTUh	1.04E-10	6.83E-12	1.45E-11	1.25E-10	1.30E-12	4.12E-11	6.90E-14	-5.03E-11	1.18E-10
HTP-nc	CTUh	2.41E-9	2.29E-10	3.01E-10	2.94E-9	4.37E-11	5.18E-10	1.60E-12	-1.15E-9	2.35E-9
SQP	Pt	5.04E+0	2.02E-1	3.14E-2	5.28E+0	3.86E-2	2.29E-1	7.00E-3	-6.81E+0	-1.26E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.60E-1	3.39E-3	5.96E-1	1.46E+0	6.48E-4	1.41E-2	1.08E-4	-1.17E+0	3.09E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.60E-1	3.39E-3	5.96E-1	1.46E+0	6.48E-4	1.41E-2	1.08E-4	-1.17E+0	3.09E-1
PENRE	MJ	9.63E+0	2.51E-1	1.88E-1	1.01E+1	4.79E-2	3.14E-1	2.90E-3	-4.93E+0	5.51E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.63E+0	2.51E-1	1.88E-1	1.01E+1	4.79E-2	3.14E-1	2.90E-3	-4.93E+0	5.51E+0
PET	MJ	1.05E+1	2.54E-1	7.84E-1	1.15E+1	4.86E-2	3.29E-1	3.01E-3	-6.10E+0	5.82E+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	3.29E-3	2.67E-5	1.45E-3	4.77E-3	5.11E-6	2.21E-4	3.37E-6	-1.87E-3	3.13E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.42E-6	6.04E-7	1.68E-7	3.19E-6	1.15E-7	5.30E-7	3.31E-9	-1.77E-6	2.07E-6
NHWD	kg	1.87E-2	1.46E-2	1.63E-3	3.50E-2	2.80E-3	1.51E-2	1.20E-2	-6.56E-3	5.83E-2
RWD	kg	1.01E-5	1.61E-6	1.79E-7	1.19E-5	3.07E-7	1.18E-6	1.79E-8	-3.47E-6	9.93E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777