Environmental Profile

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

Ecochain v3.5.64

Product:	3018735 - Ed Tech PP Bend HTB 30° 75
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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.54E-1	9.49E-3	9.91E-3	1.73E-1	1.90E-3	1.17E-1	9.46E-4	-8.86E-2	2.04E-1
GWP-f	kg CO2 eq	1.83E-1	9.49E-3	8.47E-3	2.01E-1	1.90E-3	7.97E-2	9.46E-4	-1.06E-1	1.77E-1
GWP-b	kg CO2 eq	-2.91E-2	5.76E-6	7.16E-4	-2.83E-2	1.15E-6	3.72E-2	8.38E-7	1.75E-2	2.63E-2
GWP-luluc	kg CO2 eq	1.72E-4	3.36E-6	7.16E-4	8.91E-4	6.72E-7	1.07E-5	1.64E-8	-1.55E-4	7.48E-4
ODP	kg CFC11 eq	1.17E-8	2.19E-9	8.50E-10	1.48E-8	4.38E-10	1.63E-9	2.40E-11	-6.04E-9	1.08E-8
AP	mol H+ eq	7.56E-4	5.40E-5	3.42E-5	8.44E-4	1.08E-5	6.82E-5	5.75E-7	-3.51E-4	5.73E-4
EP-fw	kg P eq	4.21E-6	7.81E-8	1.32E-7	4.42E-6	1.56E-8	3.15E-7	7.53E-10	-2.67E-6	2.09E-6
EP-m	kg N eq	1.42E-4	1.93E-5	5.77E-6	1.67E-4	3.87E-6	2.10E-5	4.70E-7	-6.99E-5	1.23E-4
EP-T	mol N eq	1.56E-3	2.13E-4	6.49E-5	1.83E-3	4.26E-5	2.31E-4	2.33E-6	-7.89E-4	1.32E-3
POCP	kg NMVOC eq	6.37E-4	6.09E-5	2.02E-5	7.18E-4	1.22E-5	7.11E-5	8.70E-7	-3.05E-4	4.98E-4
ADP-mm	kg Sb eq	1.29E-5	2.45E-7	2.06E-7	1.34E-5	4.91E-8	2.61E-7	5.78E-10	-1.08E-6	1.26E-5
ADP-f	MJ	5.87E+0	1.46E-1	1.12E-1	6.13E+0	2.91E-2	1.96E-1	1.75E-3	-3.00E+0	3.36E+0
WDP	m3 depriv.	1.19E-1	4.47E-4	3.95E-2	1.59E-1	8.94E-5	3.86E-3	8.99E-6	-7.22E-2	9.09E-2
PM	disease inc.	8.09E-9	8.56E-10	3.42E-10	9.28E-9	1.71E-10	1.06E-9	1.20E-11	-4.20E-9	6.33E-9
IR	kBq U-235 eq	5.84E-3	6.36E-4	1.04E-4	6.58E-3	1.27E-4	6.15E-4	8.17E-6	-2.62E-3	4.72E-3
ETP-fw	CTUe	3.64E+0	1.18E-1	1.76E-1	3.93E+0	2.37E-2	2.73E-1	1.76E-3	-1.81E+0	2.42E+0
HTP-c	CTUh	6.73E-11	4.21E-12	9.38E-12	8.09E-11	8.42E-13	2.69E-11	4.35E-14	-3.56E-11	7.31E-11
HTP-nc	CTUh	1.57E-9	1.41E-10	1.95E-10	1.90E-9	2.82E-11	3.41E-10	1.02E-12	-8.45E-10	1.43E-9
SQP	Pt	3.51E+0	1.25E-1	2.03E-2	3.65E+0	2.49E-2	1.51E-1	4.49E-3	-5.33E+0	-1.50E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.04E-1	2.09E-3	3.86E-1	9.92E-1	4.18E-4	9.30E-3	6.94E-5	-9.21E-1	8.02E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.04E-1	2.09E-3	3.86E-1	9.92E-1	4.18E-4	9.30E-3	6.94E-5	-9.21E-1	8.02E-2
PENRE	MJ	6.30E+0	1.55E-1	1.22E-1	6.57E+0	3.09E-2	2.09E-1	1.86E-3	-3.24E+0	3.58E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.30E+0	1.55E-1	1.22E-1	6.57E+0	3.09E-2	2.09E-1	1.86E-3	-3.24E+0	3.58E+0
PET	MJ	6.90E+0	1.57E-1	5.08E-1	7.57E+0	3.14E-2	2.18E-1	1.93E-3	-4.16E+0	3.66E+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	2.13E-3	1.65E-5	9.37E-4	3.09E-3	3.30E-6	1.42E-4	2.16E-6	-1.39E-3	1.84E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.58E-6	3.72E-7	1.08E-7	2.06E-6	7.45E-8	3.53E-7	2.11E-9	-1.19E-6	1.30E-6
NHWD	kg	1.24E-2	9.03E-3	1.06E-3	2.25E-2	1.81E-3	9.95E-3	7.71E-3	-4.66E-3	3.73E-2
RWD	kg	6.42E-6	9.90E-7	1.16E-7	7.53E-6	1.98E-7	7.93E-7	1.15E-8	-2.52E-6	6.01E-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