Environmental Profile

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

Ecochain v3.5.64

Ecochain

Product:	3010783 - Ed Tech PP Bend HTB 87,5° 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

WAVIN An Orbia business.

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	1.78E-1	1.18E-2	1.25E-2	2.02E-1	2.35E-3	1.46E-1	1.16E-3	-1.10E-1	2.41E-1
GWP-f	kg CO2 eq	2.21E-1	1.18E-2	1.07E-2	2.44E-1	2.35E-3	9.29E-2	1.16E-3	-1.30E-1	2.10E-1
GWP-b	kg CO2 eq	-4.36E-2	7.17E-6	9.00E-4	-4.27E-2	1.42E-6	5.28E-2	1.02E-6	1.97E-2	2.98E-2
GWP-luluc	kg CO2 eq	2.02E-4	4.18E-6	9.00E-4	1.11E-3	8.30E-7	1.33E-5	2.03E-8	-1.81E-4	9.39E-4
ODP	kg CFC11 eq	1.30E-8	2.72E-9	1.07E-9	1.68E-8	5.41E-10	2.01E-9	2.93E-11	-7.17E-9	1.22E-8
AP	mol H+ eq	9.10E-4	6.73E-5	4.30E-5	1.02E-3	1.34E-5	8.36E-5	7.03E-7	-4.32E-4	6.85E-4
EP-fw	kg P eq	4.99E-6	9.72E-8	1.66E-7	5.25E-6	1.93E-8	3.91E-7	9.25E-10	-3.18-6	2.48E-6
EP-m	kg N eq	1.70E-4	2.41E-5	7.26E-6	2.02E-4	4.78E-6	2.56E-5	5.50E-7	-8.61E-5	1.47E-4
EP-T	mol N eq	1.88E-3	2.65E-4	8.16E-5	2.22E-3	5.27E-5	2.81E-4	2.84E-6	-9.72E-4	1.59E-3
POCP	kg NMVOC eq	7.67E-4	7.59E-5	2.53E-5	8.68E-4	1.51E-5	8.69E-5	1.06E-6	-3.79E-4	5.92E-4
ADP-mm	kg Sb eq	1.37E-5	3.06E-7	2.60E-7	1.43E-5	6.07E-8	3.21E-7	7.08E-10	-1.27E-6	1.34E-5
ADP-f	MJ	7.12E+0	1.81E-1	1.40E-1	7.44E+0	3.60E-2	2.43E-1	2.14E-3	-3.71E+0	4.01E+0
WDP	m3 depriv.	1.45E-1	5.57E-4	4.96E-2	1.95E-1	1.11E-4	4.74E-3	1.17E-5	-8.72E-2	1.13E-1
PM	disease inc.	9.67E-9	1.07E-9	4.31E-10	1.12E-8	2.12E-10	1.31E-9	1.47E-11	-5.16E-9	7.55E-9
IR	kBq U-235 eq	6.69E-3	7.93E-4	1.31E-4	7.61E-3	1.57E-4	7.61E-4	9.95E-6	-3.15E-3	5.39E-3
ETP-fw	CTUe	4.19E+0	1.47E-1	2.21E-1	4.55E+0	2.92E-2	3.28E-1	2.08E-3	-2.11E+0	2.80E+0
HTP-c	CTUh	8.39E-11	5.24E-12	1.18E-11	1.01E-10	1.04E-12	3.38E-11	5.35E-14	-4.56E-11	9.02E-11
HTP-nc	CTUh	1.89E-9	1.76E-10	2.45E-10	2.31E-9	3.49E-11	4.21E-10	1.23E-12	-1.03E-9	1.74E-9
SQP	Pt	4.87E+0	1.55E-1	2.56E-2	5.05E+0	3.08E-2	1.88E-1	5.48E-3	-6.78E+0	-1.50E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.18E-1	2.60E-3	4.85E-1	1.31E+0	5.17E-4	1.15E-2	8.40E-5	-1.16E+0	1.62E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.18E-1	2.60E-3	4.85E-1	1.31E+0	5.17E-4	1.15E-2	8.40E-5	-1.16E+0	1.62E-1
PENRE	MJ	7.63E+0	1.93E-1	1.53E-1	7.98E+0	3.82E-2	2.58E-1	2.27E-3	-3.99E+0	4.28E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.63E+0	1.93E-1	1.53E-1	7.98E+0	3.82E-2	2.58E-1	2.27E-3	-3.99E+0	4.28E+0
PET	MJ	8.45E+0	1.95E-1	6.38E-1	9.28E+0	3.87E-2	2.70E-1	2.36E-3	-5.15E+0	4.44E+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	2.55E-3	2.05E-5	1.18E-3	3.75E-3	4.08E-6	1.68E-4	2.64E-6	-1.66E-3	2.27E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.90E-6	4.64E-7	1.36E-7	2.50E-6	9.21E-8	4.33E-7	2.59E-9	-1.45E-6	1.58E-6
NHWD	kg	1.51E-2	1.12E-2	1.33E-3	2.76E-2	2.23E-3	1.22E-2	9.41E-3	-5.90E-3	4.56E-2
RWD	kg	7.21E-6	1.23E-6	1.46E-7	8.59E-6	2.45E-7	9.80E-7	1.40E-8	-3.04E-6	6.79E-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