Environmental Profile

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

Ecochain v3.5.64

Product:	3084797 - Ed Tech PP Endcap HTM 50
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	2.29E-2	2.13E-3	2.10E-3	2.71E-2	3.95E-4	2.91E-2	1.86E-4	-1.75E-2	3.93E-2
GWP-f	kg CO2 eq	3.73E-2	2.13E-3	1.80E-3	4.13E-2	3.95E-4	1.19E-2	1.86E-4	-2.30E-2	3.08E-2
GWP-b	kg CO2 eq	-1.45E-2	1.29E-6	1.52E-4	-1.44E-2	2.40E-7	1.72E-2	1.60E-7	5.55E-3	8.36E-3
GWP-luluc	kg CO2 eq	4.80E-5	7.55E-7	1.52E-4	2.01E-4	1.40E-7	2.40E-6	3.40E-9	-4.96E-5	1.54E-4
ODP	kg CFC11 eq	1.64E-9	4.91E-10	1.80E-10	2.31E-9	9.10E-11	3.81E-10	4.68E-12	-1.29E-9	1.50E-9
AP	mol H+ eq	1.57E-4	1.21E-5	7.25E-6	1.76E-4	2.25E-6	1.54E-5	1.13E-7	-9.06E-5	1.03E-4
EP-fw	kg P eq	9.25E-7	1.75E-8	2.79E-8	9.71E-7	3.25E-9	7.10E-8	1.52E-10	-7.79E-7	2.66E-7
EP-m	kg N eq	3.18E-5	4.35E-6	1.22E-6	3.73E-5	8.05E-7	4.74E-6	7.10E-8	-1.86E-5	2.43E-5
EP-T	mol N eq	3.47E-4	4.79E-5	1.38E-5	4.09E-4	8.87E-6	5.21E-5	4.55E-7	-2.12E-4	2.58E-4
POCP	kg NMVOC eq	1.29E-4	1.37E-5	4.28E-6	1.47E-4	2.54E-6	1.62E-5	1.70E-7	-7.86E-5	8.75E-5
ADP-mm	kg Sb eq	7.48E-7	5.52E-8	4.38E-8	8.47E-7	1.02E-8	6.13E-8	1.15E-10	-1.92E-7	7.27E-7
ADP-f	MJ	1.14E+0	3.27E-2	2.37E-2	1.20E+0	6.06E-3	4.47E-2	3.43E-4	-6.58E-1	5.92E-1
WDP	m3 depriv.	2.39E-2	1.00E-4	8.37E-3	3.23E-2	1.86E-5	7.99E-4	2.53E-6	-1.86E-2	1.46E-2
PM	disease inc.	1.72E-9	1.92E-10	7.26E-11	1.99E-9	3.56E-11	2.48E-10	2.36E-12	-1.22E-9	1.05E-9
IR	kBq U-235 eq	9.18E-4	1.43E-4	2.21E-5	1.08E-3	2.65E-5	1.44E-4	1.57E-6	-7.07E-4	5.48E-4
ETP-fw	CTUe	9.52E-1	2.66E-2	3.73E-2	1.02E+0	4.92E-3	5.44E-2	2.87E-4	-5.53E-1	5.23E-1
HTP-c	CTUh	1.72E-11	9.46E-13	1.99E-12	2.02E-11	1.75E-13	6.68E-12	8.97E-15	-1.16E-11	1.55E-11
HTP-nc	CTUh	3.48E-10	3.17E-11	4.13E-11	4.20E-10	5.87E-12	7.62E-11	1.88E-13	-2.41E-10	2.61E-10
SQP	Pt	1.50E+0	2.80E-2	4.31E-3	1.53E+0	5.19E-3	3.45E-2	8.75E-4	-2.05E+0	-4.84E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.41E-1	4.70E-4	8.19E-2	3.23E-1	8.70E-5	2.09E-3	1.28E-5	-3.44E-1	-1.93E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.41E-1	4.70E-4	8.19E-2	3.23E-1	8.70E-5	2.09E-3	1.28E-5	-3.44E-1	-1.93E-2
PENRE	MJ	1.23E+0	3.47E-2	2.58E-2	1.29E+0	6.43E-3	4.76E-2	3.64E-4	-7.08E-1	6.33E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.23E+0	3.47E-2	2.58E-2	1.29E+0	6.43E-3	4.76E-2	3.64E-4	-7.08E-1	6.33E-1
PET	MJ	1.47E+0	3.52E-2	1.08E-1	1.61E+0	6.52E-3	4.97E-2	3.76E-4	-1.05E+0	6.14E-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	4.23E-4	3.70E-6	1.99E-4	6.26E-4	6.86E-7	2.46E-5	4.19E-7	-3.76E-4	2.75E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.63E-7	8.37E-8	2.30E-8	4.70E-7	1.55E-8	7.94E-8	4.20E-10	-2.79E-7	2.87E-7
NHWD	kg	3.06E-3	2.03E-3	2.24E-4	5.32E-3	3.76E-4	2.17E-3	1.50E-3	-1.46E-3	7.91E-3
RWD	kg	8.80E-7	2.23E-7	2.45E-8	1.13E-6	4.12E-8	1.87E-7	2.23E-9	-6.81E-7	6.77E-7
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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