Environmental Profile

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

Ecochain v3.5.64

Product:	3084796 - Ed Tech PP Endcap HTM 40
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	1.68E-2	1.75E-3	1.65E-3	2.02E-2	3.16E-4	2.68E-2	1.49E-4	-1.38E-2	3.37E-2
GWP-f	kg CO2 eq	3.13E-2	1.74E-3	1.41E-3	3.45E-2	3.16E-4	9.64E-3	1.49E-4	-1.94E-2	2.52E-2
GWP-b	kg CO2 eq	-1.45E-2	1.06E-6	1.19E-4	-1.44E-2	1.92E-7	1.72E-2	1.28E-7	5.57E-3	8.32E-3
GWP-luluc	kg CO2 eq	4.65E-5	6.17E-7	1.19E-4	1.66E-4	1.12E-7	1.96E-6	2.77E-9	-4.89E-5	1.20E-4
ODP	kg CFC11 eq	1.54E-9	4.02E-10	1.42E-10	2.09E-9	7.28E-11	3.24E-10	3.75E-12	-1.16E-9	1.33E-9
AP	mol H+ eq	1.35E-4	9.93E-6	5.70E-6	1.51E-4	1.80E-6	1.30E-5	9.05E-8	-8.03E-5	8.57E-5
EP-fw	kg P eq	8.39E-7	1.43E-8	2.19E-8	8.76E-7	2.60E-9	5.82E-8	1.24E-10	-7.39E-7	1.98E-7
EP-m	kg N eq	2.83E-5	3.55E-6	9.62E-7	3.28E-5	6.44E-7	4.04E-6	5.64E-8	-1.68E-5	2.07E-5
EP-T	mol N eq	3.07E-4	3.92E-5	1.08E-5	3.57E-4	7.09E-6	4.44E-5	3.65E-7	-1.92E-4	2.17E-4
POCP	kg NMVOC eq	1.11E-4	1.12E-5	3.36E-6	1.25E-4	2.03E-6	1.38E-5	1.37E-7	-6.93E-5	7.19E-5
ADP-mm	kg Sb eq	6.69E-7	4.51E-8	3.44E-8	7.48E-7	8.17E-9	5.17E-8	9.31E-11	-1.68E-7	6.41E-7
ADP-f	MJ	9.27E-1	2.68E-2	1.86E-2	9.72E-1	4.85E-3	3.70E-2	2.75E-4	-5.43E-1	4.71E-1
WDP	m3 depriv.	1.97E-2	8.21E-5	6.58E-3	2.63E-2	1.49E-5	6.48E-4	2.21E-6	-1.66E-2	1.04E-2
PM	disease inc.	1.54E-9	1.57E-10	5.71E-11	1.75E-9	2.85E-11	2.08E-10	1.89E-12	-1.14E-9	8.54E-10
IR	kBq U-235 eq	8.11E-4	1.17E-4	1.73E-5	9.45E-4	2.12E-5	1.21E-4	1.26E-6	-6.54E-4	4.35E-4
ETP-fw	CTUe	9.23E-1	2.17E-2	2.93E-2	9.74E-1	3.94E-3	4.57E-2	2.30E-4	-5.38E-1	4.85E-1
HTP-c	CTUh	1.59E-11	7.73E-13	1.56E-12	1.83E-11	1.40E-13	5.65E-12	7.33E-15	-1.10E-11	1.31E-11
HTP-nc	CTUh	3.10E-10	2.59E-11	3.24E-11	3.69E-10	4.69E-12	6.33E-11	1.52E-13	-2.24E-10	2.13E-10
SQP	Pt	1.49E+0	2.29E-2	3.39E-3	1.52E+0	4.15E-3	2.83E-2	7.01E-4	-2.05E+0	-5.01E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.38E-1	3.84E-4	6.43E-2	3.02E-1	6.96E-5	1.71E-3	1.02E-5	-3.43E-1	-3.89E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.38E-1	3.84E-4	6.43E-2	3.02E-1	6.96E-5	1.71E-3	1.02E-5	-3.43E-1	-3.89E-2
PENRE	MJ	9.95E-1	2.84E-2	2.03E-2	1.04E+0	5.15E-3	3.94E-2	2.91E-4	-5.83E-1	5.05E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.95E-1	2.84E-2	2.03E-2	1.04E+0	5.15E-3	3.94E-2	2.91E-4	-5.83E-1	5.05E-1
PET	MJ	1.23E+0	2.88E-2	8.46E-2	1.35E+0	5.22E-3	4.11E-2	3.01E-4	-9.26E-1	4.66E-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	3.61E-4	3.03E-6	1.56E-4	5.20E-4	5.49E-7	2.02E-5	3.34E-7	-3.46E-4	1.95E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.39E-7	6.84E-8	1.81E-8	4.25E-7	1.24E-8	6.70E-8	3.38E-10	-2.52E-7	2.53E-7
NHWD	kg	2.84E-3	1.66E-3	1.76E-4	4.67E-3	3.01E-4	1.79E-3	1.20E-3	-1.37E-3	6.60E-3
RWD	kg	7.88E-7	1.82E-7	1.93E-8	9.89E-7	3.30E-8	1.58E-7	1.78E-9	-6.33E-7	5.49E-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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