Environmental Profile

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

Ecochain v3.5.64

Product:	3018767 - Ed Tech Dbl.Branch HTDA 67,5° 110x110
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	8.39E-1	5.72E-2	5.10E-2	9.48E-1	9.75E-3	5.64E-1	4.88E-3	-4.51E-1	1.08E+0
GWP-f	kg CO2 eq	9.40E-1	5.72E-2	4.37E-2	1.04E+0	9.74E-3	4.22E-1	4.88E-3	-5.40E-1	9.37E-1
GWP-b	kg CO2 eq	-1.01E-1	3.47E-5	3.69E-3	-9.77E-2	5.92E-6	1.42E-1	4.33E-6	8.95E-2	1.34E-1
GWP-luluc	kg CO2 eq	8.67E-4	2.02E-5	3.69E-3	4.57E-3	3.45E-6	5.43E-5	8.53E-8	-7.68E-4	3.86E-3
ODP	kg CFC11 eq	6.31E-8	1.32E-8	4.38E-9	8.06E-8	2.25E-9	8.32E-9	1.24E-10	-3.08E-8	6.05E-8
AP	mol H+ eq	3.91E-3	3.26E-4	1.76E-4	4.41E-3	5.55E-5	3.48E-4	2.98E-6	-1.75E-3	3.06E-3
EP-fw	kg P eq	2.17E-5	4.71E-7	6.78E-7	2.29E-5	8.02E-8	1.61E-6	3.90E-9	-1.33E-5	1.12E-5
EP-m	kg N eq	7.27E-4	1.17E-4	2.97E-5	8.73E-4	1.99E-5	1.07E-4	2.48E-6	-3.47E-4	6.56E-4
EP-T	mol N eq	7.98E-3	1.28E-3	3.34E-4	9.60E-3	2.19E-4	1.18E-3	1.20E-5	-3.91E-3	7.10E-3
POCP	kg NMVOC eq	3.27E-3	3.67E-4	1.04E-4	3.74E-3	6.26E-5	3.62E-4	4.50E-6	-1.51E-3	2.66E-3
ADP-mm	kg Sb eq	7.24E-5	1.48E-6	1.06E-6	7.50E-5	2.52E-7	1.33E-6	2.99E-9	-5.61E-6	7.09E-5
ADP-f	MJ	3.02E+1	8.78E-1	5.75E-1	3.17E+1	1.50E-1	9.96E-1	9.06E-3	-1.53E+1	1.75E+1
WDP	m3 depriv.	6.15E-1	2.69E-3	2.03E-1	8.21E-1	4.59E-4	1.98E-2	4.73E-5	-3.67E-1	4.75E-1
PM	disease inc.	4.15E-8	5.16E-9	1.76E-9	4.84E-8	8.80E-10	5.41E-9	6.22E-11	-2.06E-8	3.41E-8
IR	kBq U-235 eq	3.09E-2	3.84E-3	5.36E-4	3.53E-2	6.54E-4	3.12E-3	4.22E-5	-1.31E-2	2.60E-2
ETP-fw	CTUe	1.88E+1	7.13E-1	9.07E-1	2.04E+1	1.21E-1	1.42E+0	9.25E-3	-9.06E+0	1.29E+1
HTP-c	CTUh	3.33E-10	2.54E-11	4.83E-11	4.07E-10	4.32E-12	1.37E-10	2.26E-13	-1.65E-10	3.83E-10
HTP-nc	CTUh	8.07E-9	8.50E-10	1.00E-9	9.92E-9	1.45E-10	1.75E-9	5.30E-12	-4.18E-9	7.63E-9
SQP	Pt	1.41E+1	7.51E-1	1.05E-1	1.49E+1	1.28E-1	7.68E-1	2.32E-2	-2.39E+1	-8.10E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.53E+0	1.26E-2	1.99E+0	4.53E+0	2.15E-3	4.74E-2	3.59E-4	-4.21E+0	3.70E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.53E+0	1.26E-2	1.99E+0	4.53E+0	2.15E-3	4.74E-2	3.59E-4	-4.21E+0	3.70E-1
PENRE	MJ	3.24E+1	9.32E-1	6.27E-1	3.39E+1	1.59E-1	1.06E+0	9.61E-3	-1.65E+1	1.87E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.24E+1	9.32E-1	6.27E-1	3.39E+1	1.59E-1	1.06E+0	9.61E-3	-1.65E+1	1.87E+1
PET	MJ	3.49E+1	9.45E-1	2.61E+0	3.85E+1	1.61E-1	1.11E+0	9.97E-3	-2.07E+1	1.91E+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	1.11E-2	9.93E-5	4.83E-3	1.60E-2	1.69E-5	7.43E-4	1.12E-5	-7.06E-3	9.72E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.05E-6	2.24E-6	5.58E-7	1.09E-5	3.83E-7	1.81E-6	1.09E-8	-5.95E-6	7.11E-6
NHWD	kg	6.30E-2	5.44E-2	5.44E-3	1.23E-1	9.27E-3	5.09E-2	3.98E-2	-2.20E-2	2.01E-1
RWD	kg	3.43E-5	5.97E-6	5.96E-7	4.09E-5	1.02E-6	4.03E-6	5.92E-8	-1.26E-5	3.33E-5
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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