Environmental Profile

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

Ecochain v3.5.64

Product:	3010972 - Ed Tech Branch HTEA 87,5° 32x32
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	7.80E-2	4.63E-3	4.80E-3	8.75E-2	9.50E-4	6.04E-2	4.78E-4	-4.50E-2	1.04E-1
GWP-f	kg CO2 eq	9.26E-2	4.63E-3	4.11E-3	1.01E-1	9.50E-4	4.21E-2	4.78E-4	-5.30E-2	9.18E-2
GWP-b	kg CO2 eq	-1.46E-2	2.81E-6	3.47E-4	-1.42E-2	5.77E-7	1.83E-2	4.24E-7	8.06E-3	1.21E-2
GWP-luluc	kg CO2 eq	8.47E-5	1.64E-6	3.47E-4	4.33E-4	3.36E-7	5.26E-6	8.48E-9	-7.24E-5	3.67E-4
ODP	kg CFC11 eq	6.53E-9	1.07E-9	4.12E-10	8.01E-9	2.19E-10	8.05E-10	1.22E-11	-3.06E-9	5.98E-9
AP	mol H+ eq	3.91E-4	2.64E-5	1.66E-5	4.34E-4	5.41E-6	3.38E-5	2.92E-7	-1.72E-4	3.02E-4
EP-fw	kg P eq	2.17E-6	3.81E-8	6.38E-8	2.27E-6	7.81E-9	1.56E-7	3.86E-10	-1.27E-6	1.16E-6
EP-m	kg N eq	7.21E-5	9.44E-6	2.80E-6	8.44E-5	1.94E-6	1.04E-5	2.46E-7	-3.42E-5	6.28E-5
EP-T	mol N eq	7.97E-4	1.04E-4	3.15E-5	9.32E-4	2.13E-5	1.14E-4	1.18E-6	-3.86E-4	6.84E-4
POCP	kg NMVOC eq	3.26E-4	2.97E-5	9.77E-6	3.65E-4	6.10E-6	3.52E-5	4.41E-7	-1.50E-4	2.57E-4
ADP-mm	kg Sb eq	7.63E-6	1.20E-7	1.00E-7	7.85E-6	2.46E-8	1.28E-7	2.95E-10	-5.67E-7	7.43E-6
ADP-f	MJ	2.94E+0	7.11E-2	5.41E-2	3.07E+0	1.46E-2	9.65E-2	8.89E-4	-1.49E+0	1.69E+0
WDP	m3 depriv.	6.05E-2	2.18E-4	1.91E-2	7.99E-2	4.47E-5	1.93E-3	5.03E-6	-3.48E-2	4.71E-2
PM	disease inc.	4.19E-9	4.18E-10	1.66E-10	4.77E-9	8.57E-11	5.23E-10	6.10E-12	-2.03E-9	3.36E-9
IR	kBq U-235 eq	3.13E-3	3.11E-4	5.05E-5	3.49E-3	6.37E-5	3.02E-4	4.14E-6	-1.27E-3	2.59E-3
ETP-fw	CTUe	1.81E+0	5.77E-2	8.53E-2	1.95E+0	1.18E-2	1.39E-1	9.20E-4	-8.51E-1	1.25E+0
HTP-c	CTUh	3.53E-11	2.05E-12	4.55E-12	4.19E-11	4.21E-13	1.35E-11	2.25E-14	-1.74E-11	3.84E-11
HTP-nc	CTUh	8.19E-10	6.88E-11	9.44E-11	9.83E-10	1.41E-11	1.70E-10	5.25E-13	-4.08E-10	7.60E-10
SQP	Pt	1.74E+0	6.08E-2	9.85E-3	1.81E+0	1.25E-2	7.44E-2	2.27E-3	-2.54E+0	-6.37E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.99E-1	1.02E-3	1.87E-1	4.87E-1	2.09E-4	4.60E-3	3.51E-5	-4.38E-1	5.44E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.99E-1	1.02E-3	1.87E-1	4.87E-1	2.09E-4	4.60E-3	3.51E-5	-4.38E-1	5.44E-2
PENRE	MJ	3.16E+0	7.55E-2	5.90E-2	3.29E+0	1.55E-2	1.03E-1	9.43E-4	-1.61E+0	1.80E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.16E+0	7.55E-2	5.90E-2	3.29E+0	1.55E-2	1.03E-1	9.43E-4	-1.61E+0	1.80E+0
PET	MJ	3.46E+0	7.65E-2	2.46E-1	3.78E+0	1.57E-2	1.07E-1	9.78E-4	-2.05E+0	1.86E+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	1.10E-3	8.04E-6	4.54E-4	1.57E-3	1.65E-6	7.35E-5	1.09E-6	-6.67E-4	9.75E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.37E-7	1.82E-7	5.25E-8	1.07E-6	3.73E-8	1.76E-7	1.07E-9	-6.03E-7	6.83E-7
NHWD	kg	6.46E-3	4.41E-3	5.12E-4	1.14E-2	9.03E-4	4.96E-3	3.90E-3	-2.27E-3	1.89E-2
RWD	kg	3.50E-6	4.83E-7	5.61E-8	4.04E-6	9.91E-8	3.90E-7	5.80E-9	-1.23E-6	3.31E-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

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