Environmental Profile

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

Ecochain v3.5.64

Product:	3010979 - Ed Tech Branch HTEA 87,5° 75x75
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	2.45E-1	1.54E-2	1.58E-2	2.76E-1	3.06E-3	2.09E-1	1.54E-3	-1.46E-1	3.43E-1
GWP-f	kg CO2 eq	3.03E-1	1.54E-2	1.35E-2	3.32E-1	3.06E-3	1.37E-1	1.54E-3	-1.74E-1	3.00E-1
GWP-b	kg CO2 eq	-5.85E-2	9.34E-6	1.14E-3	-5.73E-2	1.86E-6	7.11E-2	1.37E-6	2.78E-2	4.15E-2
GWP-luluc	kg CO2 eq	2.89E-4	5.44E-6	1.14E-3	1.43E-3	1.08E-6	1.70E-5	2.71E-8	-2.51E-4	1.20E-3
ODP	kg CFC11 eq	2.16E-8	3.55E-9	1.35E-9	2.65E-8	7.05E-10	2.63E-9	3.92E-11	-1.03E-8	1.96E-8
AP	mol H+ eq	1.28E-3	8.76E-5	5.44E-5	1.42E-3	1.74E-5	1.10E-4	9.43E-7	-5.71E-4	9.78E-4
EP-fw	kg P eq	7.17E-6	1.27E-7	2.09E-7	7.51E-6	2.52E-8	5.03E-7	1.24E-9	-4.32E-6	3.72E-6
EP-m	kg N eq	2.39E-4	3.14E-5	9.19E-6	2.79E-4	6.24E-6	3.41E-5	8.04E-7	-1.15E-4	2.06E-4
EP-T	mol N eq	2.63E-3	3.46E-4	1.03E-4	3.08E-3	6.87E-5	3.75E-4	3.81E-6	-1.30E-3	2.23E-3
POCP	kg NMVOC eq	1.08E-3	9.88E-5	3.21E-5	1.21E-3	1.96E-5	1.15E-4	1.42E-6	-5.00E-4	8.44E-4
ADP-mm	kg Sb eq	2.50E-5	3.98E-7	3.28E-7	2.58E-5	7.92E-8	4.17E-7	9.47E-10	-1.89E-6	2.44E-5
ADP-f	MJ	9.63E+0	2.36E-1	1.77E-1	1.00E+1	4.70E-2	3.13E-1	2.87E-3	-4.86E+0	5.55E+0
WDP	m3 depriv.	1.97E-1	7.25E-4	6.28E-2	2.60E-1	1.44E-4	6.26E-3	1.51E-5	-1.15E-1	1.51E-1
PM	disease inc.	1.39E-8	1.39E-9	5.45E-10	1.58E-8	2.76E-10	1.70E-9	1.97E-11	-6.90E-9	1.09E-8
IR	kBq U-235 eq	1.04E-2	1.03E-3	1.66E-4	1.16E-2	2.05E-4	9.85E-4	1.34E-5	-4.28E-3	8.49E-3
ETP-fw	CTUe	6.08E+0	1.92E-1	2.80E-1	6.55E+0	3.81E-2	4.53E-1	2.99E-3	-2.92E+0	4.12E+0
HTP-c	CTUh	1.19E-10	6.82E-12	1.49E-11	1.40E-10	1.36E-12	4.31E-11	7.17E-14	-6.13E-11	1.24E-10
HTP-nc	CTUh	2.68E-9	2.29E-10	3.10E-10	3.22E-9	4.55E-11	5.51E-10	1.69E-12	-1.38E-9	2.43E-9
SQP	Pt	6.65E+0	2.02E-1	3.23E-2	6.88E+0	4.02E-2	2.41E-1	7.35E-3	-9.31E+0	-2.14E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.12E+0	3.39E-3	6.14E-1	1.74E+0	6.74E-4	1.49E-2	1.14E-4	-1.59E+0	1.62E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.12E+0	3.39E-3	6.14E-1	1.74E+0	6.74E-4	1.49E-2	1.14E-4	-1.59E+0	1.62E-1
PENRE	MJ	1.03E+1	2.51E-1	1.94E-1	1.08E+1	4.99E-2	3.34E-1	3.04E-3	-5.24E+0	5.92E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.03E+1	2.51E-1	1.94E-1	1.08E+1	4.99E-2	3.34E-1	3.04E-3	-5.24E+0	5.92E+0
PET	MJ	1.14E+1	2.54E-1	8.07E-1	1.25E+1	5.05E-2	3.48E-1	3.16E-3	-6.83E+0	6.08E+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	3.59E-3	2.67E-5	1.49E-3	5.11E-3	5.32E-6	2.40E-4	3.54E-6	-2.23E-3	3.13E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.79E-6	6.04E-7	1.72E-7	3.57E-6	1.20E-7	5.72E-7	3.46E-9	-2.04E-6	2.22E-6
NHWD	kg	2.15E-2	1.46E-2	1.68E-3	3.78E-2	2.91E-3	1.61E-2	1.26E-2	-7.90E-3	6.15E-2
RWD	kg	1.16E-5	1.61E-6	1.84E-7	1.34E-5	3.19E-7	1.27E-6	1.88E-8	-4.16E-6	1.09E-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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