Environmental Profile

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

Ecochain v3.5.64

Product:	3010973 - Ed Tech Branch HTEA 87,5° 40x40
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	1.26E-1	9.38E-3	7.80E-3	1.43E-1	1.56E-3	1.09E-1	7.94E-4	-7.61E-2	1.78E-1
GWP-f	kg CO2 eq	1.55E-1	9.37E-3	6.68E-3	1.71E-1	1.56E-3	7.39E-2	7.94E-4	-8.78E-2	1.60E-1
GWP-b	kg CO2 eq	-2.94E-2	5.69E-6	5.64E-4	-2.88E-2	9.45E-7	3.46E-2	7.07E-7	1.18E-2	1.76E-2
GWP-luluc	kg CO2 eq	1.39E-4	3.32E-6	5.64E-4	7.06E-4	5.51E-7	8.49E-6	1.42E-8	-1.11E-4	6.03E-4
ODP	kg CFC11 eq	1.21E-8	2.16E-9	6.70E-10	1.49E-8	3.59E-10	1.30E-9	2.03E-11	-5.22E-9	1.14E-8
AP	mol H+ eq	6.71E-4	5.34E-5	2.69E-5	7.51E-4	8.87E-6	5.50E-5	4.89E-7	-2.78E-4	5.37E-4
EP-fw	kg P eq	3.69E-6	7.71E-8	1.04E-7	3.87E-6	1.28E-8	2.51E-7	6.48E-10	-1.99E-6	2.15E-6
EP-m	kg N eq	1.22E-4	1.91E-5	4.55E-6	1.45E-4	3.17E-6	1.70E-5	4.29E-7	-5.58E-5	1.10E-4
EP-T	mol N eq	1.35E-3	2.11E-4	5.11E-5	1.62E-3	3.50E-5	1.87E-4	1.97E-6	-6.29E-4	1.21E-3
POCP	kg NMVOC eq	5.57E-4	6.02E-5	1.59E-5	6.33E-4	1.00E-5	5.71E-5	7.35E-7	-2.46E-4	4.55E-4
ADP-mm	kg Sb eq	1.49E-5	2.42E-7	1.63E-7	1.53E-5	4.03E-8	2.05E-7	4.93E-10	-9.99E-7	1.45E-5
ADP-f	MJ	4.90E+0	1.44E-1	8.79E-2	5.13E+0	2.39E-2	1.56E-1	1.48E-3	-2.45E+0	2.86E+0
WDP	m3 depriv.	1.01E-1	4.42E-4	3.11E-2	1.33E-1	7.33E-5	3.18E-3	8.72E-6	-5.47E-2	8.15E-2
PM	disease inc.	7.25E-9	8.46E-10	2.70E-10	8.36E-9	1.41E-10	8.41E-10	1.02E-11	-3.27E-9	6.08E-9
IR	kBq U-235 eq	5.61E-3	6.29E-4	8.20E-5	6.32E-3	1.04E-4	4.87E-4	6.90E-6	-2.04E-3	4.88E-3
ETP-fw	CTUe	2.95E+0	1.17E-1	1.39E-1	3.21E+0	1.94E-2	2.32E-1	1.59E-3	-1.31E+0	2.15E+0
HTP-c	CTUh	6.27E-11	4.16E-12	7.39E-12	7.43E-11	6.91E-13	2.19E-11	3.78E-14	-2.96E-11	6.73E-11
HTP-nc	CTUh	1.42E-9	1.39E-10	1.53E-10	1.71E-9	2.31E-11	2.78E-10	8.91E-13	-6.55E-10	1.36E-9
SQP	Pt	3.28E+0	1.23E-1	1.60E-2	3.42E+0	2.04E-2	1.20E-1	3.79E-3	-4.29E+0	-7.22E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.49E-1	2.06E-3	3.04E-1	8.55E-1	3.43E-4	7.43E-3	5.87E-5	-7.27E-1	1.35E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.49E-1	2.06E-3	3.04E-1	8.55E-1	3.43E-4	7.43E-3	5.87E-5	-7.27E-1	1.35E-1
PENRE	MJ	5.25E+0	1.53E-1	9.59E-2	5.50E+0	2.54E-2	1.66E-1	1.57E-3	-2.64E+0	3.05E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.25E+0	1.53E-1	9.59E-2	5.50E+0	2.54E-2	1.66E-1	1.57E-3	-2.64E+0	3.05E+0
PET	MJ	5.80E+0	1.55E-1	4.00E-1	6.35E+0	2.57E-2	1.73E-1	1.63E-3	-3.37E+0	3.19E+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	1.88E-3	1.63E-5	7.39E-4	2.64E-3	2.70E-6	1.26E-4	1.83E-6	-1.04E-3	1.73E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.49E-6	3.68E-7	8.54E-8	1.94E-6	6.11E-8	2.86E-7	1.80E-9	-1.04E-6	1.26E-6
NHWD	kg	1.12E-2	8.92E-3	8.32E-4	2.10E-2	1.48E-3	8.12E-3	6.51E-3	-3.81E-3	3.33E-2
RWD	kg	6.41E-6	9.78E-7	9.12E-8	7.48E-6	1.63E-7	6.27E-7	9.68E-9	-2.00E-6	6.29E-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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