Environmental Profile

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

Ecochain v3.5.64

Product:	3018793 - Ed Tech Double Length Socket HTLL 110
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	4.62E-1	3.47E-2	3.38E-2	5.30E-1	6.21E-3	3.51E-1	3.02E-3	-2.90E-1	6.00E-1
GWP-f	kg CO2 eq	5.63E-1	3.47E-2	2.89E-2	6.26E-1	6.20E-3	2.28E-1	3.02E-3	-3.34E-1	5.30E-1
GWP-b	kg CO2 eq	-1.01E-1	2.11E-5	2.44E-3	-9.88E-2	3.77E-6	1.23E-1	2.66E-6	4.45E-2	6.84E-2
GWP-luluc	kg CO2 eq	4.69E-4	1.23E-5	2.44E-3	2.92E-3	2.20E-6	3.53E-5	5.23E-8	-4.21E-4	2.54E-3
ODP	kg CFC11 eq	2.82E-8	7.99E-9	2.90E-9	3.91E-8	1.43E-9	5.21E-9	7.63E-11	-1.75E-8	2.84E-8
AP	mol H+ eq	2.25E-3	1.98E-4	1.17E-4	2.57E-3	3.53E-5	2.17E-4	1.83E-6	-1.10E-3	1.72E-3
EP-fw	kg P eq	1.20E-5	2.85E-7	4.49E-7	1.27E-5	5.11E-8	1.04E-6	2.40E-9	-7.70E-6	6.11E-6
EP-m	kg N eq	4.19E-4	7.07E-5	1.97E-5	5.10E-4	1.26E-5	6.58E-5	1.37E-6	-2.16E-4	3.73E-4
EP-T	mol N eq	4.62E-3	7.79E-4	2.21E-4	5.62E-3	1.39E-4	7.24E-4	7.40E-6	-2.44E-3	4.05E-3
POCP	kg NMVOC eq	1.91E-3	2.23E-4	6.87E-5	2.21E-3	3.98E-5	2.25E-4	2.77E-6	-9.68E-4	1.51E-3
ADP-mm	kg Sb eq	2.80E-5	8.97E-7	7.04E-7	2.96E-5	1.61E-7	8.41E-7	1.84E-9	-3.04E-6	2.76E-5
ADP-f	MJ	1.84E+1	5.32E-1	3.80E-1	1.94E+1	9.53E-2	6.39E-1	5.57E-3	-9.71E+0	1.04E+1
WDP	m3 depriv.	3.72E-1	1.63E-3	1.35E-1	5.08E-1	2.92E-4	1.24E-2	2.94E-5	-2.21E-1	2.99E-1
PM	disease inc.	2.34E-8	3.13E-9	1.17E-9	2.77E-8	5.60E-10	3.44E-9	3.83E-11	-1.27E-8	1.90E-8
IR	kBq U-235 eq	1.56E-2	2.33E-3	3.55E-4	1.82E-2	4.16E-4	2.00E-3	2.59E-5	-7.76E-3	1.29E-2
ETP-fw	CTUe	9.62E+0	4.32E-1	6.00E-1	1.06E+1	7.73E-2	8.29E-1	5.22E-3	-4.97E+0	6.60E+0
HTP-c	CTUh	2.01E-10	1.54E-11	3.20E-11	2.49E-10	2.75E-12	8.84E-11	1.38E-13	-1.11E-10	2.28E-10
HTP-nc	CTUh	4.59E-9	5.15E-10	6.64E-10	5.77E-9	9.22E-11	1.10E-9	3.15E-12	-2.55E-9	4.42E-9
SQP	Pt	1.13E+1	4.55E-1	6.93E-2	1.18E+1	8.15E-2	4.98E-1	1.43E-2	-1.56E+1	-3.19E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.92E+0	7.64E-3	1.32E+0	3.24E+0	1.37E-3	3.06E-2	2.18E-4	-2.67E+0	5.99E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.92E+0	7.64E-3	1.32E+0	3.24E+0	1.37E-3	3.06E-2	2.18E-4	-2.67E+0	5.99E-1
PENRE	MJ	1.98E+1	5.65E-1	4.15E-1	2.08E+1	1.01E-1	6.81E-1	5.91E-3	-1.05E+1	1.11E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.98E+1	5.65E-1	4.15E-1	2.08E+1	1.01E-1	6.81E-1	5.91E-3	-1.05E+1	1.11E+1
PET	MJ	2.17E+1	5.73E-1	1.73E+0	2.40E+1	1.02E-1	7.12E-1	6.13E-3	-1.31E+1	1.17E+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	6.36E-3	6.02E-5	3.20E-3	9.62E-3	1.08E-5	4.21E-4	6.87E-6	-4.12E-3	5.94E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.42E-6	1.36E-6	3.69E-7	6.15E-6	2.44E-7	1.12E-6	6.72E-9	-3.53E-6	3.99E-6
NHWD	kg	3.58E-2	3.30E-2	3.60E-3	7.24E-2	5.90E-3	3.20E-2	2.45E-2	-1.45E-2	1.20E-1
RWD	kg	1.63E-5	3.62E-6	3.94E-7	2.03E-5	6.48E-7	2.57E-6	3.64E-8	-7.42E-6	1.61E-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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