Environmental Profile

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

Ecochain v3.5.64

Product:	3011014 - Ed Tech Coupler 2 Sockets HTMM 50
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	1.04E-1	7.24E-3	5.10E-3	1.17E-1	1.11E-3	8.35E-2	5.94E-4	-5.63E-2	1.46E-1
GWP-f	kg CO2 eq	1.19E-1	7.24E-3	4.37E-3	1.31E-1	1.11E-3	6.52E-2	5.94E-4	-6.43E-2	1.33E-1
GWP-b	kg CO2 eq	-1.50E-2	4.40E-6	3.69E-4	-1.46E-2	6.74E-7	1.83E-2	5.38E-7	8.06E-3	1.17E-2
GWP-luluc	kg CO2 eq	1.03E-4	2.56E-6	3.69E-4	4.75E-4	3.93E-7	5.74E-6	1.07E-8	-7.36E-5	4.07E-4
ODP	kg CFC11 eq	1.19E-8	1.67E-9	4.38E-10	1.40E-8	2.56E-10	9.01E-10	1.53E-11	-4.18E-9	1.10E-8
AP	mol H+ eq	5.34E-4	4.12E-5	1.76E-5	5.92E-4	6.32E-6	3.90E-5	3.69E-7	-1.88E-4	4.50E-4
EP-fw	kg P eq	2.98E-6	5.96E-8	6.78E-8	3.11E-6	9.14E-9	1.71E-7	4.87E-10	-1.33E-6	1.95E-6
EP-m	kg N eq	9.45E-5	1.48E-5	2.97E-6	1.12E-4	2.26E-6	1.22E-5	3.73E-7	-3.78E-5	8.92E-5
EP-T	mol N eq	1.05E-3	1.63E-4	3.34E-5	1.25E-3	2.49E-5	1.34E-4	1.49E-6	-4.26E-4	9.83E-4
POCP	kg NMVOC eq	4.41E-4	4.65E-5	1.04E-5	4.98E-4	7.13E-6	4.04E-5	5.53E-7	-1.66E-4	3.80E-4
ADP-mm	kg Sb eq	1.62E-5	1.87E-7	1.06E-7	1.65E-5	2.87E-8	1.39E-7	3.70E-10	-8.66E-7	1.58E-5
ADP-f	MJ	3.72E+0	1.11E-1	5.75E-2	3.89E+0	1.70E-2	1.06E-1	1.12E-3	-1.73E+0	2.28E+0
WDP	m3 depriv.	7.74E-2	3.41E-4	2.03E-2	9.80E-2	5.23E-5	2.31E-3	6.09E-6	-3.69E-2	6.35E-2
PM	disease inc.	5.86E-9	6.53E-10	1.76E-10	6.69E-9	1.00E-10	5.72E-10	7.67E-12	-2.15E-9	5.23E-9
IR	kBq U-235 eq	5.14E-3	4.86E-4	5.36E-5	5.68E-3	7.45E-5	3.30E-4	5.24E-6	-1.41E-3	4.68E-3
ETP-fw	CTUe	2.31E+0	9.02E-2	9.07E-2	2.49E+0	1.38E-2	1.81E-1	1.35E-3	-8.84E-1	1.81E+0
HTP-c	CTUh	4.79E-11	3.21E-12	4.83E-12	5.59E-11	4.92E-13	1.46E-11	2.84E-14	-1.87E-11	5.23E-11
HTP-nc	CTUh	1.13E-9	1.08E-10	1.00E-10	1.34E-9	1.65E-11	1.96E-10	7.05E-13	-4.35E-10	1.11E-9
SQP	Pt	1.88E+0	9.51E-2	1.05E-2	1.98E+0	1.46E-2	8.08E-2	2.86E-3	-2.55E+0	-4.68E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.26E-1	1.59E-3	1.99E-1	5.26E-1	2.44E-4	5.07E-3	4.54E-5	-4.40E-1	9.20E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.26E-1	1.59E-3	1.99E-1	5.26E-1	2.44E-4	5.07E-3	4.54E-5	-4.40E-1	9.20E-2
PENRE	MJ	3.98E+0	1.18E-1	6.27E-2	4.16E+0	1.81E-2	1.13E-1	1.19E-3	-1.87E+0	2.43E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.98E+0	1.18E-1	6.27E-2	4.16E+0	1.81E-2	1.13E-1	1.19E-3	-1.87E+0	2.43E+0
PET	MJ	4.31E+0	1.20E-1	2.61E-1	4.69E+0	1.83E-2	1.18E-1	1.23E-3	-2.31E+0	2.52E+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	1.51E-3	1.26E-5	4.83E-4	2.00E-3	1.93E-6	1.05E-4	1.38E-6	-7.08E-4	1.41E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.23E-6	2.84E-7	5.58E-8	1.57E-6	4.36E-8	2.04E-7	1.35E-9	-7.97E-7	1.02E-6
NHWD	kg	8.76E-3	6.89E-3	5.44E-4	1.62E-2	1.06E-3	5.79E-3	4.91E-3	-2.43E-3	2.55E-2
RWD	kg	6.17E-6	7.56E-7	5.96E-8	6.99E-6	1.16E-7	4.25E-7	7.31E-9	-1.41E-6	6.13E-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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