

# Environmental Profile

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

Ecochain v3.5.64



Product: 3011024 - Ed Tech PP Reducer Type A HTR 50x75  
 Unit: 1 piece  
 Manufacturer: Wavin - IT - SM Maddalena

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



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.

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	☑	☑	☑	☑									

## 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

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.14E-1	8.74E-3	7.95E-3	1.31E-1	1.52E-3	9.59E-2	7.50E-4	-7.20E-2	1.57E-1
GWP-f	kg CO2 eq	1.43E-1	8.73E-3	6.81E-3	1.59E-1	1.52E-3	6.12E-2	7.50E-4	-8.37E-2	1.38E-1
GWP-b	kg CO2 eq	-2.91E-2	5.30E-6	5.75E-4	-2.85E-2	9.20E-7	3.46E-2	6.63E-7	1.18E-2	1.79E-2
GWP-luluc	kg CO2 eq	1.27E-4	3.09E-6	5.75E-4	7.04E-4	5.36E-7	8.53E-6	1.31E-8	-1.11E-4	6.02E-4
ODP	kg CFC11 eq	8.62E-9	2.01E-9	6.83E-10	1.13E-8	3.49E-10	1.28E-9	1.90E-11	-4.65E-9	8.32E-9
AP	mol H+ eq	5.88E-4	4.97E-5	2.75E-5	6.65E-4	8.63E-6	5.36E-5	4.56E-7	-2.76E-4	4.52E-4
EP-fw	kg P eq	3.20E-6	7.18E-8	1.06E-7	3.38E-6	1.25E-8	2.51E-7	5.98E-10	-1.98E-6	1.67E-6
EP-m	kg N eq	1.10E-4	1.78E-5	4.64E-6	1.32E-4	3.09E-6	1.64E-5	3.63E-7	-5.49E-5	9.70E-5
EP-T	mol N eq	1.21E-3	1.96E-4	5.21E-5	1.46E-3	3.40E-5	1.81E-4	1.84E-6	-6.19E-4	1.05E-3
POCP	kg NMVOC eq	4.99E-4	5.61E-5	1.62E-5	5.71E-4	9.73E-6	5.57E-5	6.90E-7	-2.43E-4	3.94E-4
ADP-mm	kg Sb eq	9.33E-6	2.26E-7	1.66E-7	9.72E-6	3.92E-8	2.05E-7	4.58E-10	-8.31E-7	9.14E-6
ADP-f	MJ	4.63E+0	1.34E-1	8.96E-2	4.85E+0	2.33E-2	1.56E-1	1.39E-3	-2.39E+0	2.64E+0
WDP	m3 depriv.	9.37E-2	4.11E-4	3.17E-2	1.26E-1	7.14E-5	3.06E-3	7.32E-6	-5.49E-2	7.40E-2
PM	disease inc.	6.27E-9	7.88E-10	2.75E-10	7.33E-9	1.37E-10	8.40E-10	9.54E-12	-3.26E-9	5.06E-9
IR	kBq U-235 eq	4.40E-3	5.86E-4	8.36E-5	5.07E-3	1.02E-4	4.87E-4	6.46E-6	-1.99E-3	3.68E-3
ETP-fw	CTUe	2.61E+0	1.09E-1	1.41E-1	2.86E+0	1.89E-2	2.12E-1	1.37E-3	-1.30E+0	1.79E+0
HTP-c	CTUh	5.44E-11	3.87E-12	7.53E-12	6.58E-11	6.72E-13	2.15E-11	3.45E-14	-2.93E-11	5.87E-11
HTP-nc	CTUh	1.22E-9	1.30E-10	1.56E-10	1.50E-9	2.25E-11	2.70E-10	8.00E-13	-6.51E-10	1.15E-9
SQP	Pt	3.19E+0	1.15E-1	1.63E-2	3.32E+0	1.99E-2	1.21E-1	3.56E-3	-4.28E+0	-8.14E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.33E-1	1.92E-3	3.10E-1	8.45E-1	3.34E-4	7.42E-3	5.47E-5	-7.27E-1	1.26E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.33E-1	1.92E-3	3.10E-1	8.45E-1	3.34E-4	7.42E-3	5.47E-5	-7.27E-1	1.26E-1
PENRE	MJ	4.96E+0	1.42E-1	9.77E-2	5.20E+0	2.47E-2	1.66E-1	1.47E-3	-2.58E+0	2.82E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.96E+0	1.42E-1	9.77E-2	5.20E+0	2.47E-2	1.66E-1	1.47E-3	-2.58E+0	2.82E+0
PET	MJ	5.49E+0	1.44E-1	4.08E-1	6.05E+0	2.50E-2	1.73E-1	1.53E-3	-3.30E+0	2.94E+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	1.65E-3	1.52E-5	7.53E-4	2.42E-3	2.63E-6	1.10E-4	1.71E-6	-1.04E-3	1.50E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.22E-6	3.43E-7	8.70E-8	1.65E-6	5.95E-8	2.78E-7	1.67E-9	-9.39E-7	1.05E-6
NHWD	kg	9.64E-3	8.31E-3	8.48E-4	1.88E-2	1.44E-3	7.88E-3	6.11E-3	-3.78E-3	3.05E-2
RWD	kg	4.79E-6	9.11E-7	9.29E-8	5.79E-6	1.58E-7	6.27E-7	9.07E-9	-1.92E-6	4.66E-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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