Environmental Profile

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

Ecochain v3.5.64

Product:	3011053 - Ed Tech Eccentric Reducer 50x40
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	7.68E-2	5.49E-3	4.50E-3	8.68E-2	9.11E-4	6.16E-2	4.64E-4	-4.37E-2	1.06E-1
GWP-f	kg CO2 eq	9.14E-2	5.49E-3	3.85E-3	1.01E-1	9.10E-4	4.33E-2	4.64E-4	-5.17E-2	9.37E-2
GWP-b	kg CO2 eq	-1.47E-2	3.33E-6	3.25E-4	-1.43E-2	5.53E-7	1.83E-2	4.14E-7	8.07E-3	1.20E-2
GWP-luluc	kg CO2 eq	8.59E-5	1.94E-6	3.25E-4	4.13E-4	3.22E-7	4.99E-6	8.28E-9	-7.20E-5	3.46E-4
ODP	kg CFC11 eq	7.13E-9	1.26E-9	3.87E-10	8.78E-9	2.10E-10	7.74E-10	1.18E-11	-3.10E-9	6.67E-9
AP	mol H+ eq	3.93E-4	3.13E-5	1.55E-5	4.40E-4	5.19E-6	3.26E-5	2.85E-7	-1.66E-4	3.12E-4
EP-fw	kg P eq	2.20E-6	4.51E-8	5.99E-8	2.31E-6	7.49E-9	1.48E-7	3.77E-10	-1.25E-6	1.22E-6
EP-m	kg N eq	7.23E-5	1.12E-5	2.62E-6	8.61E-5	1.86E-6	1.01E-5	2.51E-7	-3.33E-5	6.51E-5
EP-T	mol N eq	7.99E-4	1.23E-4	2.95E-5	9.52E-4	2.04E-5	1.11E-4	1.15E-6	-3.76E-4	7.09E-4
POCP	kg NMVOC eq	3.27E-4	3.52E-5	9.16E-6	3.71E-4	5.85E-6	3.40E-5	4.30E-7	-1.45E-4	2.66E-4
ADP-mm	kg Sb eq	8.64E-6	1.42E-7	9.38E-8	8.87E-6	2.36E-8	1.22E-7	2.87E-10	-5.86E-7	8.43E-6
ADP-f	MJ	2.88E+0	8.42E-2	5.07E-2	3.01E+0	1.40E-2	9.20E-2	8.67E-4	-1.44E+0	1.69E+0
WDP	m3 depriv.	5.95E-2	2.58E-4	1.79E-2	7.77E-2	4.29E-5	1.87E-3	4.93E-6	-3.36E-2	4.60E-2
PM	disease inc.	4.26E-9	4.95E-10	1.56E-10	4.91E-9	8.22E-11	4.99E-10	5.95E-12	-1.98E-9	3.52E-9
IR	kBq U-235 eq	3.30E-3	3.68E-4	4.73E-5	3.72E-3	6.11E-5	2.89E-4	4.04E-6	-1.25E-3	2.82E-3
ETP-fw	CTUe	1.85E+0	6.84E-2	8.00E-2	2.00E+0	1.13E-2	1.37E-1	9.30E-4	-8.44E-1	1.31E+0
HTP-c	CTUh	3.58E-11	2.43E-12	4.26E-12	4.25E-11	4.04E-13	1.29E-11	2.20E-14	-1.71E-11	3.87E-11
HTP-nc	CTUh	8.30E-10	8.15E-11	8.85E-11	1.00E-9	1.35E-11	1.64E-10	5.20E-13	-3.98E-10	7.80E-10
SQP	Pt	1.75E+0	7.20E-2	9.24E-3	1.84E+0	1.20E-2	7.06E-2	2.22E-3	-2.54E+0	-6.19E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.00E-1	1.21E-3	1.75E-1	4.77E-1	2.00E-4	4.37E-3	3.44E-5	-4.37E-1	4.45E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.00E-1	1.21E-3	1.75E-1	4.77E-1	2.00E-4	4.37E-3	3.44E-5	-4.37E-1	4.45E-2
PENRE	MJ	3.09E+0	8.94E-2	5.53E-2	3.23E+0	1.48E-2	9.80E-2	9.19E-4	-1.55E+0	1.80E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.09E+0	8.94E-2	5.53E-2	3.23E+0	1.48E-2	9.80E-2	9.19E-4	-1.55E+0	1.80E+0
PET	MJ	3.39E+0	9.06E-2	2.31E-1	3.71E+0	1.50E-2	1.02E-1	9.54E-4	-1.99E+0	1.84E+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	1.11E-3	9.53E-6	4.26E-4	1.54E-3	1.58E-6	7.41E-5	1.07E-6	-6.50E-4	9.69E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.67E-7	2.15E-7	4.93E-8	1.13E-6	3.57E-8	1.70E-7	1.05E-9	-6.07E-7	7.31E-7
NHWD	kg	6.58E-3	5.22E-3	4.80E-4	1.23E-2	8.66E-4	4.78E-3	3.80E-3	-2.22E-3	1.95E-2
RWD	kg	3.77E-6	5.73E-7	5.26E-8	4.39E-6	9.50E-8	3.72E-7	5.66E-9	-1.22E-6	3.65E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777