Environmental Profile

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

Ecochain v3.5.80

Product:	3059253 - Tigris PERT/Al/PE Pipe WT 25x2.5 L=5
Unit:	1 piece
Manufacturer:	Wavin - PL - MPC

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	30-06-2023
End of validity:	30-06-2028
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 - PL - MPC (2021). (☑ = 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 EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 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	5.76E+0	1.16E-1	1.06E-1	5.99E+0	1.67E-2	2.96E+0	5.70E-2	6.57E-1	9.68E+0
GWP-f	kg CO2 eq	6.42E+0	1.16E-1	6.89E-2	6.61E+0	1.67E-2	2.29E+0	5.68E-2	6.58E-1	9.63E+0
GWP-b	kg CO2 eq	-6.75E-1	5.25E-5	3.73E-2	-6.37E-1	1.01E-5	6.69E-1	2.85E-4	-6.37E-3	2.56E-2
GWP-luluc	kg CO2 eq	1.72E-2	4.29E-5	3.36E-5	1.73E-2	5.91E-6	7.33E-6	1.43E-6	6.43E-3	2.37E-2
ODP	kg CFC11 eq	2.54E-7	2.56E-8	4.02E-9	2.83E-7	3.85E-9	3.37E-9	1.67E-9	-8.06E-8	2.12E-7
AP	mol H+ eq	3.76E-2	7.08E-4	3.12E-4	3.86E-2	9.51E-5	3.55E-4	4.16E-5	1.10E-2	5.01E-2
EP-fw	kg P eq	2.06E-4	1.16E-6	2.02E-6	2.09E-4	1.37E-7	3.72E-7	6.63E-8	5.73E-5	2.67E-4
EP-m	kg N eq	5.81E-3	2.45E-4	5.66E-5	6.11E-3	3.40E-5	1.58E-4	2.54E-5	1.44E-3	7.78E-3
EP-T	mol N eq	6.53E-2	2.70E-3	5.42E-4	6.86E-2	3.75E-4	1.80E-3	1.69E-4	1.56E-2	8.65E-2
POCP	kg NMVOC eq	2.13E-2	7.68E-4	1.76E-4	2.23E-2	1.07E-4	4.82E-4	6.01E-5	5.11E-3	2.80E-2
ADP-mm	kg Sb eq	4.37E-5	2.91E-6	3.39E-6	5.00E-5	4.32E-7	2.21E-7	4.15E-8	-3.74E-4	-3.24E-4
ADP-f	MJ	1.06E+2	1.75E+0	5.19E-1	1.08E+2	2.56E-1	2.15E-1	1.26E-1	6.59E+0	1.15E+2
WDP	m3 depriv.	2.27E+0	6.21E-3	1.47E-2	2.29E+0	7.87E-4	2.38E-3	6.28E-4	3.62E-1	2.66E+0
PM	disease inc.	4.29E-7	1.03E-8	2.88E-9	4.42E-7	1.51E-9	3.39E-9	8.31E-10	1.34E-7	5.82E-7
IR	kBq U-235 eq	1.39E-1	7.32E-3	7.22E-4	1.47E-1	1.12E-3	7.38E-4	6.59E-4	2.12E-2	1.70E-1
ETP-fw	CTUe	1.38E+2	1.55E+0	2.50E+0	1.42E+2	2.08E-1	8.33E-1	6.48E+1	3.70E+1	2.45E+2
HTP-c	CTUh	7.00E-9	5.08E-11	1.31E-10	7.18E-9	7.41E-12	3.60E-10	5.12E-12	2.27E-9	9.82E-9
HTP-nc	CTUh	1.30E-7	1.70E-9	3.13E-9	1.35E-7	2.48E-10	2.50E-9	1.08E-10	3.93E-8	1.77E-7
SQP	Pt	7.49E+1	1.50E+0	4.85E-1	7.69E+1	2.19E-1	1.47E-1	3.01E-1	-1.08E+1	6.68E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.63E+1	1.15E-4	3.89E+0	2.02E+1	3.68E-3	9.16E-3	8.45E-3	-4.37E-1	1.98E+1
PERM	MJ	0	2.16E-2	0	2.16E-2	0	0	0	0	2.16E-2
PERT	MJ	1.63E+1	2.18E-2	3.89E+0	2.02E+1	3.68E-3	9.16E-3	8.45E-3	-4.37E-1	1.98E+1
PENRE	MJ	1.13E+2	1.81E-2	5.58E-1	1.14E+2	2.72E-1	2.29E-1	1.34E-1	6.07E+0	1.21E+2
PENRM	MJ	0	1.84E+0	0	1.84E+0	0	0	0	0	1.84E+0
PENRT	MJ	1.13E+2	1.85E+0	5.58E-1	1.16E+2	2.72E-1	2.29E-1	1.34E-1	6.07E+0	1.22E+2
PET	MJ	1.30E+2	1.88E+0	4.45E+0	1.36E+2	2.76E-1	2.38E-1	1.42E-1	5.63E+0	1.42E+2
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	5.96E-2	2.11E-4	4.06E-4	6.02E-2	2.90E-5	4.71E-4	1.59E-4	1.21E-2	7.30E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.92E-3	4.40E-6	5.34E-7	1.93E-3	6.56E-7	8.90E-7	1.50E-7	-7.89E-4	1.14E-3
NHWD	kg	9.62E-1	1.10E-1	8.80E-3	1.08E+0	1.59E-2	2.82E-2	5.10E-1	3.14E-1	1.95E+0
RWD	kg	1.37E-4	1.15E-5	7.81E-7	1.49E-4	1.74E-6	9.56E-7	8.41E-7	2.08E-5	1.73E-4
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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