Environmental Profile

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

Ecochain v3.5.80

Product:	3018300 - Tigris PEXc/Al/PE Pipe WT 25x2.5 L=50
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	5.91E+1	1.29E+0	7.64E-1	6.11E+1	1.16E-1	1.85E+1	3.74E-1	7.45E+0	8.76E+1
GWP-f	kg CO2 eq	6.20E+1	1.29E+0	4.81E-1	6.38E+1	1.16E-1	1.49E+1	3.72E-1	6.47E+0	8.57E+1
GWP-b	kg CO2 eq	-3.11E+0	5.85E-4	2.82E-1	-2.83E+0	7.02E-5	3.62E+0	2.69E-3	9.30E-1	1.72E+0
GWP-luluc	kg CO2 eq	1.72E-1	4.77E-4	2.13E-4	1.73E-1	4.09E-5	7.49E-5	1.11E-5	5.60E-2	2.29E-1
ODP	kg CFC11 eq	2.59E-6	2.84E-7	2.81E-8	2.91E-6	2.66E-8	3.60E-8	1.19E-8	-4.79E-7	2.50E-6
AP	mol H+ eq	3.61E-1	7.83E-3	1.96E-3	3.71E-1	6.59E-4	2.48E-3	3.00E-4	9.54E-2	4.69E-1
EP-fw	kg P eq	2.04E-3	1.29E-5	1.30E-5	2.07E-3	9.52E-7	3.47E-6	5.13E-7	4.27E-4	2.50E-3
EP-m	kg N eq	5.71E-2	2.71E-3	3.86E-4	6.02E-2	2.36E-4	1.05E-3	1.78E-4	1.23E-2	7.40E-2
EP-T	mol N eq	6.37E-1	2.99E-2	3.59E-3	6.71E-1	2.60E-3	1.19E-2	1.22E-3	1.36E-1	8.22E-1
POCP	kg NMVOC eq	2.07E-1	8.51E-3	1.16E-3	2.16E-1	7.42E-4	3.26E-3	4.24E-4	3.92E-2	2.60E-1
ADP-mm	kg Sb eq	3.93E-4	3.24E-5	2.02E-5	4.46E-4	2.99E-6	3.53E-6	2.99E-7	-3.79E-3	-3.34E-3
ADP-f	MJ	9.97E+2	1.94E+1	3.55E+0	1.02E+3	1.78E+0	2.29E+0	9.08E-1	-1.38E+1	1.01E+3
WDP	m3 depriv.	1.96E+1	6.91E-2	9.67E-2	1.98E+1	5.45E-3	1.09E-2	4.62E-3	-5.22E-1	1.93E+1
PM	disease inc.	3.97E-6	1.15E-7	1.93E-8	4.10E-6	1.04E-8	2.80E-8	5.87E-9	1.14E-6	5.29E-6
IR	kBq U-235 eq	1.21E+0	8.14E-2	5.18E-3	1.30E+0	7.76E-3	8.85E-3	4.94E-3	8.73E-2	1.41E+0
ETP-fw	CTUe	1.42E+3	1.73E+1	1.56E+1	1.46E+3	1.44E+0	7.60E+0	6.49E+2	2.96E+2	2.41E+3
HTP-c	CTUh	6.74E-8	5.64E-10	8.19E-10	6.88E-8	5.13E-11	2.20E-9	4.27E-11	2.10E-8	9.21E-8
HTP-nc	CTUh	1.27E-6	1.89E-8	1.94E-8	1.31E-6	1.72E-9	1.73E-8	8.93E-10	3.54E-7	1.68E-6
SQP	Pt	4.22E+2	1.67E+1	3.06E+0	4.42E+2	1.52E+0	1.54E+0	2.10E+0	-3.84E+2	6.31E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.11E+2	1.15E-3	2.29E+1	1.34E+2	2.55E-2	8.59E-2	7.07E-2	-4.62E+1	8.79E+1
PERM	MJ	0	2.41E-1	0	2.41E-1	0	0	0	0	2.41E-1
PERT	MJ	1.11E+2	2.42E-1	2.29E+1	1.34E+2	2.55E-2	8.59E-2	7.07E-2	-4.62E+1	8.81E+1
PENRE	MJ	1.07E+3	1.81E-1	3.83E+0	1.07E+3	1.88E+0	2.44E+0	9.62E-1	-2.20E+1	1.05E+3
PENRM	MJ	0	2.04E+1	0	2.04E+1	0	0	0	0	2.04E+1
PENRT	MJ	1.07E+3	2.06E+1	3.83E+0	1.09E+3	1.88E+0	2.44E+0	9.62E-1	-2.20E+1	1.07E+3
PET	MJ	1.18E+3	2.09E+1	2.67E+1	1.22E+3	1.91E+0	2.53E+0	1.03E+0	-6.82E+1	1.16E+3
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	5.26E-1	2.35E-3	2.67E-3	5.31E-1	2.01E-4	2.67E-3	1.15E-3	4.40E-2	5.80E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.92E-2	4.89E-5	4.04E-6	1.93E-2	4.54E-6	8.19E-6	1.08E-6	-7.84E-3	1.14E-2
NHWD	kg	1.00E+1	1.22E+0	6.62E-2	1.13E+1	1.10E-1	1.58E-1	3.53E+0	2.91E+0	1.80E+1
RWD	kg	1.29E-3	1.28E-4	5.90E-6	1.42E-3	1.21E-5	1.21E-5	6.09E-6	1.03E-4	1.55E-3
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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