Environmental Profile

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

Ecochain v3.5.80

Product:	3023032 - 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	6.05E+1	1.27E+0	7.14E-1	6.24E+1	1.16E-1	1.67E+1	3.74E-1	7.69E+0	8.73E+1
GWP-f	kg CO2 eq	6.16E+1	1.27E+0	4.50E-1	6.33E+1	1.16E-1	1.49E+1	3.72E-1	6.73E+0	8.54E+1
GWP-b	kg CO2 eq	-1.32E+0	5.77E-4	2.64E-1	-1.06E+0	7.02E-5	1.82E+0	2.69E-3	9.09E-1	1.67E+0
GWP-luluc	kg CO2 eq	1.71E-1	4.71E-4	1.99E-4	1.72E-1	4.09E-5	6.95E-5	1.11E-5	5.70E-2	2.29E-1
ODP	kg CFC11 eq	2.54E-6	2.81E-7	2.63E-8	2.85E-6	2.66E-8	3.36E-8	1.19E-8	-4.48E-7	2.48E-6
AP	mol H+ eq	3.58E-1	7.73E-3	1.83E-3	3.68E-1	6.59E-4	2.39E-3	3.00E-4	9.71E-2	4.68E-1
EP-fw	kg P eq	2.03E-3	1.28E-5	1.22E-5	2.05E-3	9.52E-7	3.29E-6	5.13E-7	4.40E-4	2.50E-3
EP-m	kg N eq	5.64E-2	2.68E-3	3.60E-4	5.95E-2	2.36E-4	1.02E-3	1.78E-4	1.28E-2	7.37E-2
EP-T	mol N eq	6.30E-1	2.95E-2	3.35E-3	6.63E-1	2.60E-3	1.15E-2	1.22E-3	1.41E-1	8.19E-1
POCP	kg NMVOC eq	2.04E-1	8.40E-3	1.08E-3	2.13E-1	7.42E-4	3.15E-3	4.24E-4	4.11E-2	2.59E-1
ADP-mm	kg Sb eq	3.83E-4	3.20E-5	1.88E-5	4.34E-4	2.99E-6	3.26E-6	2.99E-7	-3.79E-3	-3.35E-3
ADP-f	MJ	9.90E+2	1.92E+1	3.32E+0	1.01E+3	1.78E+0	2.12E+0	9.08E-1	-9.23E+0	1.01E+3
WDP	m3 depriv.	1.95E+1	6.82E-2	9.03E-2	1.97E+1	5.45E-3	9.85E-3	4.62E-3	-4.26E-1	1.93E+1
PM	disease inc.	3.92E-6	1.13E-7	1.80E-8	4.05E-6	1.04E-8	2.68E-8	5.87E-9	1.17E-6	5.27E-6
IR	kBq U-235 eq	1.19E+0	8.03E-2	4.85E-3	1.28E+0	7.76E-3	8.06E-3	4.94E-3	1.00E-1	1.40E+0
ETP-fw	CTUe	1.41E+3	1.70E+1	1.45E+1	1.44E+3	1.44E+0	7.43E+0	6.49E+2	3.05E+2	2.41E+3
HTP-c	CTUh	6.66E-8	5.57E-10	7.64E-10	6.79E-8	5.13E-11	2.16E-9	4.27E-11	2.16E-8	9.18E-8
HTP-nc	CTUh	1.26E-6	1.86E-8	1.81E-8	1.30E-6	1.72E-9	1.70E-8	8.93E-10	3.60E-7	1.68E-6
SQP	Pt	2.71E+2	1.65E+1	2.85E+0	2.91E+2	1.52E+0	1.41E+0	2.10E+0	-2.55E+2	4.06E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.92E+1	1.15E-3	2.13E+1	1.11E+2	2.55E-2	8.06E-2	7.07E-2	-2.68E+1	8.39E+1
PERM	MJ	0	2.38E-1	0	2.38E-1	0	0	0	0	2.38E-1
PERT	MJ	8.92E+1	2.39E-1	2.13E+1	1.11E+2	2.55E-2	8.06E-2	7.07E-2	-2.68E+1	8.41E+1
PENRE	MJ	1.06E+3	1.81E-1	3.58E+0	1.06E+3	1.88E+0	2.26E+0	9.62E-1	-1.71E+1	1.05E+3
PENRM	MJ	0	2.02E+1	0	2.02E+1	0	0	0	0	2.02E+1
PENRT	MJ	1.06E+3	2.03E+1	3.58E+0	1.08E+3	1.88E+0	2.26E+0	9.62E-1	-1.71E+1	1.07E+3
PET	MJ	1.15E+3	2.06E+1	2.49E+1	1.19E+3	1.91E+0	2.34E+0	1.03E+0	-4.39E+1	1.15E+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	5.23E-1	2.32E-3	2.49E-3	5.28E-1	2.01E-4	2.59E-3	1.15E-3	4.68E-2	5.79E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.92E-2	4.83E-5	3.78E-6	1.92E-2	4.54E-6	7.78E-6	1.08E-6	-7.83E-3	1.14E-2
NHWD	kg	9.89E+0	1.20E+0	6.20E-2	1.12E+1	1.10E-1	1.48E-1	3.53E+0	2.98E+0	1.79E+1
RWD	kg	1.26E-3	1.26E-4	5.53E-6	1.39E-3	1.21E-5	1.10E-5	6.09E-6	1.18E-4	1.54E-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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