

Environmental Profile

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

Ecochain v3.5.80



Product: 3070827 - Tigris PEXc/Al/PE Pipe WT 32x3.0 L=3
 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.28E+0	1.37E-1	9.59E-2	6.51E+0	1.58E-2	2.38E+0	5.24E-2	8.26E-1	9.79E+0
GWP-f	kg CO2 eq	6.51E+0	1.37E-1	6.27E-2	6.71E+0	1.58E-2	2.14E+0	5.21E-2	8.26E-1	9.74E+0
GWP-b	kg CO2 eq	-2.49E-1	6.32E-5	3.32E-2	-2.15E-1	9.60E-6	2.47E-1	2.90E-4	-6.61E-3	2.47E-2
GWP-luluc	kg CO2 eq	1.75E-2	5.01E-5	3.13E-5	1.76E-2	5.59E-6	6.55E-6	1.39E-6	6.72E-3	2.44E-2
ODP	kg CFC11 eq	2.73E-7	3.02E-8	3.65E-9	3.07E-7	3.64E-9	2.94E-9	1.59E-9	-6.64E-8	2.48E-7
AP	mol H+ eq	3.81E-2	7.94E-4	2.92E-4	3.92E-2	9.00E-5	3.03E-4	3.97E-5	1.17E-2	5.13E-2
EP-fw	kg P eq	2.16E-4	1.38E-6	1.88E-6	2.19E-4	1.30E-7	3.33E-7	6.42E-8	6.00E-5	2.79E-4
EP-m	kg N eq	5.95E-3	2.80E-4	5.18E-5	6.28E-3	3.22E-5	1.34E-4	2.45E-5	1.58E-3	8.05E-3
EP-T	mol N eq	6.67E-2	3.08E-3	4.99E-4	7.03E-2	3.55E-4	1.53E-3	1.61E-4	1.74E-2	8.98E-2
POCP	kg NMVOC eq	2.15E-2	8.80E-4	1.62E-4	2.26E-2	1.01E-4	4.10E-4	5.69E-5	5.55E-3	2.87E-2
ADP-mm	kg Sb eq	4.33E-5	3.47E-6	3.20E-6	4.99E-5	4.09E-7	1.78E-7	3.96E-8	-3.87E-4	-3.36E-4
ADP-f	MJ	1.03E+2	2.06E+0	4.75E-1	1.06E+2	2.43E-1	1.79E-1	1.20E-1	9.04E+0	1.15E+2
WDP	m3 depriv.	2.16E+0	7.38E-3	1.35E-2	2.18E+0	7.45E-4	1.94E-3	5.96E-4	3.75E-1	2.56E+0
PM	disease inc.	4.23E-7	1.23E-8	2.64E-9	4.38E-7	1.43E-9	2.91E-9	7.90E-10	1.43E-7	5.85E-7
IR	kBq U-235 eq	1.43E-1	8.65E-3	6.52E-4	1.52E-1	1.06E-3	5.92E-4	6.34E-4	2.29E-2	1.77E-1
ETP-fw	CTUe	1.41E+2	1.84E+0	2.33E+0	1.45E+2	1.97E-1	8.18E-1	6.71E+1	4.02E+1	2.53E+2
HTP-c	CTUh	7.01E-9	5.97E-11	1.22E-10	7.19E-9	7.01E-12	3.11E-10	5.05E-12	2.39E-9	9.90E-9
HTP-nc	CTUh	1.32E-7	2.01E-9	2.93E-9	1.37E-7	2.35E-10	2.26E-9	1.07E-10	4.13E-8	1.81E-7
SQP	Pt	3.81E+1	1.79E+0	4.53E-1	4.03E+1	2.08E-1	1.22E-1	2.86E-1	-2.51E+0	3.84E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.08E+1	0	3.69E+0	1.45E+1	3.48E-3	8.10E-3	8.35E-3	1.29E+0	1.58E+1
PERM	MJ	0	2.58E-2	0	2.58E-2	0	0	0	0	2.58E-2
PERT	MJ	1.08E+1	2.58E-2	3.69E+0	1.45E+1	3.48E-3	8.10E-3	8.35E-3	1.29E+0	1.58E+1
PENRE	MJ	1.10E+2	0	5.10E-1	1.11E+2	2.58E-1	1.91E-1	1.28E-1	8.74E+0	1.20E+2
PENRM	MJ	0	2.19E+0	0	2.19E+0	0	0	0	0	2.19E+0
PENRT	MJ	1.10E+2	2.19E+0	5.10E-1	1.13E+2	2.58E-1	1.91E-1	1.28E-1	8.74E+0	1.22E+2
PET	MJ	1.21E+2	2.22E+0	4.20E+0	1.27E+2	2.61E-1	1.99E-1	1.36E-1	1.00E+1	1.38E+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	5.83E-2	2.51E-4	3.75E-4	5.89E-2	2.75E-5	3.98E-4	1.51E-4	1.26E-2	7.21E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.99E-3	5.23E-6	4.75E-7	1.99E-3	6.20E-7	7.74E-7	1.43E-7	-8.12E-4	1.18E-3
NHWD	kg	1.05E+0	1.31E-1	7.84E-3	1.19E+0	1.50E-2	2.10E-2	4.82E-1	3.30E-1	2.04E+0
RWD	kg	1.45E-4	1.36E-5	6.95E-7	1.60E-4	1.65E-6	7.48E-7	8.03E-7	2.29E-5	1.86E-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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