

Environmental Profile

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

Ecochain v3.5.80



Product: 3061212 - Tigris PEXc/Al/PE Pipe WT 20x2.25 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.14E+0	6.86E-2	5.81E-2	4.26E+0	1.09E-2	1.68E+0	3.75E-2	3.42E-1	6.34E+0
GWP-f	kg CO2 eq	4.29E+0	6.85E-2	3.55E-2	4.39E+0	1.08E-2	1.52E+0	3.74E-2	3.42E-1	6.30E+0
GWP-b	kg CO2 eq	-1.58E-1	3.08E-5	2.26E-2	-1.36E-1	6.59E-6	1.64E-1	1.81E-4	-4.17E-3	2.48E-2
GWP-luluc	kg CO2 eq	1.09E-2	2.54E-5	1.40E-5	1.09E-2	3.84E-6	4.17E-6	9.25E-7	4.08E-3	1.50E-2
ODP	kg CFC11 eq	1.76E-7	1.51E-8	2.08E-9	1.93E-7	2.50E-9	1.89E-9	1.09E-9	-5.52E-8	1.43E-7
AP	mol H+ eq	2.44E-2	4.26E-4	1.26E-4	2.49E-2	6.18E-5	2.07E-4	2.70E-5	6.92E-3	3.21E-2
EP-fw	kg P eq	1.45E-4	6.85E-7	8.73E-7	1.47E-4	8.93E-8	2.18E-7	4.27E-8	3.61E-5	1.83E-4
EP-m	kg N eq	3.82E-3	1.46E-4	2.76E-5	3.99E-3	2.21E-5	9.24E-5	1.67E-5	9.16E-4	5.04E-3
EP-T	mol N eq	4.30E-2	1.61E-3	2.49E-4	4.48E-2	2.44E-4	1.05E-3	1.09E-4	1.01E-2	5.63E-2
POCP	kg NMVOC eq	1.41E-2	4.58E-4	7.97E-5	1.46E-2	6.96E-5	2.82E-4	3.91E-5	3.19E-3	1.82E-2
ADP-mm	kg Sb eq	2.95E-5	1.72E-6	1.21E-6	3.24E-5	2.81E-7	1.12E-7	2.69E-8	-2.36E-4	-2.03E-4
ADP-f	MJ	7.27E+1	1.03E+0	2.56E-1	7.40E+1	1.66E-1	1.16E-1	8.18E-2	2.35E+0	7.67E+1
WDP	m3 depriv.	1.51E+0	3.66E-3	6.66E-3	1.52E+0	5.11E-4	1.43E-3	4.06E-4	2.07E-1	1.73E+0
PM	disease inc.	2.67E-7	6.09E-9	1.35E-9	2.74E-7	9.79E-10	1.95E-9	5.39E-10	8.58E-8	3.63E-7
IR	kBq U-235 eq	9.47E-2	4.32E-3	3.94E-4	9.95E-2	7.28E-4	3.78E-4	4.25E-4	1.29E-2	1.14E-1
ETP-fw	CTUe	8.77E+1	9.16E-1	9.96E-1	8.96E+1	1.35E-1	5.29E-1	4.09E+1	2.42E+1	1.55E+2
HTP-c	CTUh	4.37E-9	3.00E-11	5.28E-11	4.45E-9	4.81E-12	2.17E-10	3.28E-12	1.44E-9	6.12E-9
HTP-nc	CTUh	8.28E-8	9.99E-10	1.23E-9	8.51E-8	1.61E-10	1.58E-9	6.97E-11	2.49E-8	1.12E-7
SQP	Pt	2.48E+1	8.84E-1	1.98E-1	2.59E+1	1.42E-1	7.61E-2	1.96E-1	-1.89E+0	2.44E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.98E+0	9.14E-5	1.33E+0	8.31E+0	2.39E-3	5.29E-3	5.42E-3	7.13E-1	9.04E+0
PERM	MJ	0	1.27E-2	0	1.27E-2	0	0	0	0	1.27E-2
PERT	MJ	6.98E+0	1.28E-2	1.33E+0	8.33E+0	2.39E-3	5.29E-3	5.42E-3	7.13E-1	9.05E+0
PENRE	MJ	7.77E+1	1.44E-2	2.76E-1	7.80E+1	1.77E-1	1.24E-1	8.67E-2	1.85E+0	8.02E+1
PENRM	MJ	0	1.08E+0	0	1.08E+0	0	0	0	0	1.08E+0
PENRT	MJ	7.77E+1	1.09E+0	2.76E-1	7.91E+1	1.77E-1	1.24E-1	8.67E-2	1.85E+0	8.13E+1
PET	MJ	8.47E+1	1.11E+0	1.61E+0	8.74E+1	1.79E-1	1.29E-1	9.21E-2	2.57E+0	9.04E+1
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	3.89E-2	1.25E-4	1.83E-4	3.93E-2	1.88E-5	2.78E-4	1.03E-4	7.31E-3	4.70E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.21E-3	2.59E-6	3.23E-7	1.22E-3	4.26E-7	5.24E-7	9.74E-8	-4.98E-4	7.18E-4
NHWD	kg	6.64E-1	6.46E-2	5.28E-3	7.34E-1	1.03E-2	1.34E-2	3.31E-1	1.99E-1	1.29E+0
RWD	kg	9.71E-5	6.77E-6	4.72E-7	1.04E-4	1.13E-6	4.74E-7	5.44E-7	1.27E-5	1.19E-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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