

Environmental Profile

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

Ecochain v3.5.80



Product: 3018299 - Tigris PEXc/Al/PE Pipe WT 20x2.25 L=100
 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	7.90E+1	1.30E+0	1.02E+0	8.14E+1	1.63E-1	2.55E+1	5.48E-1	7.46E+0	1.15E+2
GWP-f	kg CO2 eq	8.19E+1	1.30E+0	6.42E-1	8.38E+1	1.63E-1	2.19E+1	5.45E-1	6.48E+0	1.13E+2
GWP-b	kg CO2 eq	-3.01E+0	5.83E-4	3.77E-1	-2.64E+0	9.90E-5	3.62E+0	3.44E-3	9.09E-1	1.89E+0
GWP-luluc	kg CO2 eq	2.18E-1	4.83E-4	2.86E-4	2.19E-1	5.77E-5	9.25E-5	1.51E-5	7.27E-2	2.91E-1
ODP	kg CFC11 eq	3.36E-6	2.86E-7	3.76E-8	3.68E-6	3.76E-8	4.38E-8	1.66E-8	-7.72E-7	3.01E-6
AP	mol H+ eq	4.68E-1	8.10E-3	2.62E-3	4.78E-1	9.29E-4	3.33E-3	4.18E-4	1.21E-1	6.04E-1
EP-fw	kg P eq	2.73E-3	1.30E-5	1.74E-5	2.76E-3	1.34E-6	4.40E-6	6.98E-7	5.63E-4	3.33E-3
EP-m	kg N eq	7.38E-2	2.78E-3	5.15E-4	7.70E-2	3.32E-4	1.43E-3	2.55E-4	1.55E-2	9.46E-2
EP-T	mol N eq	8.25E-1	3.07E-2	4.80E-3	8.61E-1	3.66E-3	1.62E-2	1.69E-3	1.72E-1	1.05E+0
POCP	kg NMVOC eq	2.71E-1	8.70E-3	1.55E-3	2.81E-1	1.05E-3	4.41E-3	5.97E-4	4.95E-2	3.36E-1
ADP-mm	kg Sb eq	5.28E-4	3.25E-5	2.71E-5	5.88E-4	4.22E-6	3.93E-6	4.16E-7	-4.77E-3	-4.18E-3
ADP-f	MJ	1.37E+3	1.95E+1	4.75E+0	1.40E+3	2.50E+0	2.73E+0	1.26E+0	-4.51E+1	1.36E+3
WDP	m3 depriv.	2.74E+1	6.93E-2	1.29E-1	2.76E+1	7.68E-3	1.78E-2	6.41E-3	-3.17E-1	2.74E+1
PM	disease inc.	5.08E-6	1.15E-7	2.57E-8	5.22E-6	1.47E-8	3.58E-8	8.22E-9	1.47E-6	6.75E-6
IR	kBq U-235 eq	1.63E+0	8.19E-2	6.92E-3	1.71E+0	1.09E-2	1.02E-2	6.78E-3	1.23E-1	1.86E+0
ETP-fw	CTUe	1.79E+3	1.74E+1	2.08E+1	1.82E+3	2.03E+0	1.01E+1	8.17E+2	3.94E+2	3.05E+3
HTP-c	CTUh	8.58E-8	5.69E-10	1.10E-9	8.74E-8	7.23E-11	3.13E-9	5.67E-11	2.67E-8	1.17E-7
HTP-nc	CTUh	1.62E-6	1.89E-8	2.60E-8	1.66E-6	2.42E-9	2.43E-8	1.19E-9	4.52E-7	2.14E-6
SQP	Pt	4.60E+2	1.67E+1	4.09E+0	4.81E+2	2.14E+0	1.81E+0	2.96E+0	-3.80E+2	1.08E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.31E+2	1.83E-3	3.07E+1	1.62E+2	3.59E-2	1.08E-1	9.38E-2	-4.11E+1	1.21E+2
PERM	MJ	0	2.41E-1	0	2.41E-1	0	0	0	0	2.41E-1
PERT	MJ	1.31E+2	2.43E-1	3.07E+1	1.62E+2	3.59E-2	1.08E-1	9.38E-2	-4.11E+1	1.21E+2
PENRE	MJ	1.47E+3	2.88E-1	5.11E+0	1.47E+3	2.66E+0	2.91E+0	1.34E+0	-5.87E+1	1.42E+3
PENRM	MJ	0	2.05E+1	0	2.05E+1	0	0	0	0	2.05E+1
PENRT	MJ	1.47E+3	2.07E+1	5.11E+0	1.49E+3	2.66E+0	2.91E+0	1.34E+0	-5.87E+1	1.44E+3
PET	MJ	1.60E+3	2.10E+1	3.58E+1	1.66E+3	2.69E+0	3.02E+0	1.43E+0	-9.98E+1	1.56E+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	7.06E-1	2.36E-3	3.57E-3	7.12E-1	2.83E-4	3.84E-3	1.59E-3	6.44E-2	7.82E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.42E-2	4.91E-5	5.38E-6	2.43E-2	6.40E-6	1.04E-5	1.50E-6	-9.91E-3	1.44E-2
NHWD	kg	1.28E+1	1.22E+0	8.83E-2	1.41E+1	1.55E-1	2.01E-1	4.98E+0	3.71E+0	2.32E+1
RWD	kg	1.72E-3	1.28E-4	7.87E-6	1.86E-3	1.70E-5	1.37E-5	8.46E-6	1.39E-4	2.04E-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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