

Environmental Profile

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

Ecochain v3.5.80



Product: 3041230 - Tigris PEXc/Al/PE Pipe WT 50x4.5 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	2.87E+1	3.61E-1	4.04E-1	2.95E+1	6.94E-2	1.05E+1	2.25E-1	4.53E+0	4.48E+1
GWP-f	kg CO2 eq	3.01E+1	3.61E-1	2.56E-1	3.08E+1	6.93E-2	9.06E+0	2.24E-1	4.53E+0	4.46E+1
GWP-b	kg CO2 eq	-1.51E+0	1.67E-4	1.48E-1	-1.36E+0	4.21E-5	1.48E+0	1.34E-3	-3.02E-2	8.99E-2
GWP-luluc	kg CO2 eq	8.17E-2	1.32E-4	1.16E-4	8.19E-2	2.45E-5	2.73E-5	6.20E-6	3.14E-2	1.13E-1
ODP	kg CFC11 eq	1.47E-6	7.97E-8	1.50E-8	1.56E-6	1.60E-8	1.25E-8	7.02E-9	-2.50E-7	1.35E-6
AP	mol H+ eq	1.79E-1	2.09E-3	1.07E-3	1.82E-1	3.95E-4	1.32E-3	1.75E-4	5.51E-2	2.39E-1
EP-fw	kg P eq	9.69E-4	3.64E-6	7.07E-6	9.80E-4	5.71E-7	1.41E-6	2.87E-7	2.82E-4	1.26E-3
EP-m	kg N eq	2.91E-2	7.38E-4	2.06E-4	3.01E-2	1.41E-4	5.88E-4	1.04E-4	7.53E-3	3.84E-2
EP-T	mol N eq	3.26E-1	8.13E-3	1.93E-3	3.36E-1	1.56E-3	6.68E-3	7.11E-4	8.27E-2	4.28E-1
POCP	kg NMVOC eq	1.03E-1	2.32E-3	6.24E-4	1.06E-1	4.45E-4	1.79E-3	2.50E-4	2.66E-2	1.35E-1
ADP-mm	kg Sb eq	2.17E-4	9.14E-6	1.12E-5	2.38E-4	1.79E-6	7.86E-7	1.75E-7	-1.81E-3	-1.56E-3
ADP-f	MJ	4.57E+2	5.44E+0	1.90E+0	4.64E+2	1.06E+0	7.91E-1	5.32E-1	5.55E+1	5.22E+2
WDP	m3 depriv.	9.09E+0	1.95E-2	5.21E-2	9.17E+0	3.27E-3	6.37E-3	2.65E-3	1.85E+0	1.10E+1
PM	disease inc.	2.04E-6	3.24E-8	1.04E-8	2.09E-6	6.26E-9	1.29E-8	3.48E-9	6.68E-7	2.78E-6
IR	kBq U-235 eq	7.05E-1	2.28E-2	2.74E-3	7.31E-1	4.65E-3	2.64E-3	2.82E-3	1.11E-1	8.51E-1
ETP-fw	CTUe	6.62E+2	4.85E+0	8.50E+0	6.75E+2	8.64E-1	3.31E+0	3.13E+2	1.88E+2	1.18E+3
HTP-c	CTUh	3.28E-8	1.57E-10	4.47E-10	3.34E-8	3.08E-11	1.36E-9	2.28E-11	1.12E-8	4.60E-8
HTP-nc	CTUh	6.24E-7	5.31E-9	1.06E-8	6.40E-7	1.03E-9	9.68E-9	4.79E-10	1.93E-7	8.45E-7
SQP	Pt	2.19E+2	4.72E+0	1.67E+0	2.26E+2	9.11E-1	5.56E-1	1.25E+0	-1.77E+1	2.11E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.42E+1	0	1.27E+1	6.69E+1	1.53E-2	3.41E-2	3.77E-2	4.80E+0	7.18E+1
PERM	MJ	0	6.81E-2	0	6.81E-2	0	0	0	0	6.81E-2
PERT	MJ	5.42E+1	6.81E-2	1.27E+1	6.69E+1	1.53E-2	3.41E-2	3.77E-2	4.80E+0	7.18E+1
PENRE	MJ	4.87E+2	0	2.05E+0	4.90E+2	1.13E+0	8.45E-1	5.63E-1	5.55E+1	5.48E+2
PENRM	MJ	0	5.78E+0	0	5.78E+0	0	0	0	0	5.78E+0
PENRT	MJ	4.87E+2	5.78E+0	2.05E+0	4.95E+2	1.13E+0	8.45E-1	5.63E-1	5.55E+1	5.53E+2
PET	MJ	5.42E+2	5.85E+0	1.47E+1	5.62E+2	1.15E+0	8.80E-1	6.01E-1	6.03E+1	6.25E+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	2.58E-1	6.63E-4	1.44E-3	2.60E-1	1.20E-4	1.70E-3	6.69E-4	6.05E-2	3.23E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.31E-3	1.38E-5	2.11E-6	9.32E-3	2.72E-6	3.36E-6	6.32E-7	-3.78E-3	5.55E-3
NHWD	kg	5.82E+0	3.45E-1	3.47E-2	6.20E+0	6.60E-2	9.46E-2	2.12E+0	1.54E+0	1.00E+1
RWD	kg	7.54E-4	3.57E-5	3.09E-6	7.93E-4	7.24E-6	3.40E-6	3.55E-6	1.12E-4	9.18E-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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