

# Environmental Profile

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

Ecochain v3.5.80



Product: 3041228 - Tigris PEXc/Al/PE Pipe WT 32x3.0 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	☑	☑	☑	☑
<b>Product stage</b>					<b>Use stage</b>							<b>End-of-Life stage</b>				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
<b>Construction process stage</b>					<b>Benefits and loads beyond the system boundaries</b>											
A4 Transport gate to site A5 Assembly / Construction installation process					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

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.03E+1	2.28E-1	1.48E-1	1.07E+1	2.62E-2	4.00E+0	8.68E-2	1.40E+0	1.62E+1
GWP-f	kg CO2 eq	1.08E+1	2.28E-1	9.23E-2	1.11E+1	2.62E-2	3.50E+0	8.65E-2	1.40E+0	1.61E+1
GWP-b	kg CO2 eq	-4.96E-1	1.05E-4	5.56E-2	-4.40E-1	1.59E-5	4.93E-1	4.84E-4	-1.10E-2	4.24E-2
GWP-luluc	kg CO2 eq	2.92E-2	8.35E-5	3.96E-5	2.94E-2	9.28E-6	1.08E-5	2.31E-6	1.12E-2	4.06E-2
ODP	kg CFC11 eq	4.54E-7	5.03E-8	5.41E-9	5.10E-7	6.04E-9	4.90E-9	2.64E-9	-1.08E-7	4.16E-7
AP	mol H+ eq	6.33E-2	1.32E-3	3.62E-4	6.50E-2	1.49E-4	5.04E-4	6.60E-5	1.94E-2	8.51E-2
EP-fw	kg P eq	3.58E-4	2.30E-6	2.43E-6	3.63E-4	2.16E-7	5.52E-7	1.07E-7	9.98E-5	4.63E-4
EP-m	kg N eq	9.89E-3	4.66E-4	7.34E-5	1.04E-2	5.35E-5	2.24E-4	4.06E-5	2.63E-3	1.34E-2
EP-T	mol N eq	1.11E-1	5.14E-3	6.77E-4	1.17E-1	5.89E-4	2.54E-3	2.67E-4	2.89E-2	1.49E-1
POCP	kg NMVOC eq	3.57E-2	1.47E-3	2.18E-4	3.74E-2	1.68E-4	6.82E-4	9.44E-5	9.23E-3	4.76E-2
ADP-mm	kg Sb eq	7.19E-5	5.78E-6	3.66E-6	8.13E-5	6.78E-7	2.96E-7	6.58E-8	-6.45E-4	-5.63E-4
ADP-f	MJ	1.71E+2	3.44E+0	6.78E-1	1.75E+2	4.03E-1	2.97E-1	2.00E-1	1.53E+1	1.91E+2
WDP	m3 depriv.	3.58E+0	1.23E-2	1.82E-2	3.61E+0	1.24E-3	3.14E-3	9.90E-4	6.21E-1	4.23E+0
PM	disease inc.	7.06E-7	2.05E-8	3.64E-9	7.31E-7	2.37E-9	4.84E-9	1.31E-9	2.37E-7	9.76E-7
IR	kBq U-235 eq	2.37E-1	1.44E-2	1.00E-3	2.52E-1	1.76E-3	9.88E-4	1.05E-3	3.80E-2	2.94E-1
ETP-fw	CTUe	2.34E+2	3.07E+0	2.87E+0	2.40E+2	3.27E-1	1.35E+0	1.12E+2	6.67E+1	4.20E+2
HTP-c	CTUh	1.17E-8	9.95E-11	1.51E-10	1.19E-8	1.16E-11	5.17E-10	8.40E-12	3.97E-9	1.65E-8
HTP-nc	CTUh	2.20E-7	3.35E-9	3.56E-9	2.27E-7	3.90E-10	3.74E-9	1.77E-10	6.86E-8	3.00E-7
SQP	Pt	7.07E+1	2.98E+0	5.65E-1	7.42E+1	3.44E-1	2.02E-1	4.74E-1	-5.77E+0	6.95E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.90E+1	0	4.11E+0	2.32E+1	5.78E-3	1.34E-2	1.39E-2	1.82E+0	2.50E+1
PERM	MJ	0	4.30E-2	0	4.30E-2	0	0	0	0	4.30E-2
PERT	MJ	1.90E+1	4.30E-2	4.11E+0	2.32E+1	5.78E-3	1.34E-2	1.39E-2	1.82E+0	2.51E+1
PENRE	MJ	1.82E+2	0	7.30E-1	1.83E+2	4.27E-1	3.17E-1	2.12E-1	1.48E+1	1.99E+2
PENRM	MJ	0	3.65E+0	0	3.65E+0	0	0	0	0	3.65E+0
PENRT	MJ	1.82E+2	3.65E+0	7.30E-1	1.87E+2	4.27E-1	3.17E-1	2.12E-1	1.48E+1	2.02E+2
PET	MJ	2.01E+2	3.69E+0	4.84E+0	2.10E+2	4.33E-1	3.31E-1	2.26E-1	1.67E+1	2.27E+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	9.65E-2	4.19E-4	5.02E-4	9.74E-2	4.56E-5	6.61E-4	2.51E-4	2.10E-2	1.19E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.31E-3	8.71E-6	7.95E-7	3.32E-3	1.03E-6	1.28E-6	2.38E-7	-1.35E-3	1.97E-3
NHWD	kg	1.76E+0	2.18E-1	1.30E-2	1.99E+0	2.50E-2	3.45E-2	8.00E-1	5.49E-1	3.40E+0
RWD	kg	2.42E-4	2.26E-5	1.16E-6	2.65E-4	2.74E-6	1.25E-6	1.33E-6	3.81E-5	3.09E-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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