

Environmental Profile

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

Ecochain v3.5.80



Product: 3052191 - Tigris PERT/Al/PE Pipe WT 16x2.0 L=200
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					Use stage							End-of-Life stage				
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				
Construction process stage												Benefits and loads beyond the system boundaries				
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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.05E+2	2.24E+0	1.35E+0	1.09E+2	2.29E-1	3.28E+1	7.78E-1	9.22E+0	1.52E+2
GWP-f	kg CO2 eq	1.06E+2	2.24E+0	8.66E-1	1.10E+2	2.29E-1	3.09E+1	7.74E-1	8.27E+0	1.50E+2
GWP-b	kg CO2 eq	-1.41E+0	1.01E-3	4.88E-1	-9.17E-1	1.39E-4	1.82E+0	4.65E-3	8.53E-1	1.76E+0
GWP-luluc	kg CO2 eq	2.87E-1	8.32E-4	4.04E-4	2.88E-1	8.10E-5	1.11E-4	2.09E-5	1.01E-1	3.89E-1
ODP	kg CFC11 eq	4.03E-6	4.94E-7	5.06E-8	4.58E-6	5.27E-8	5.24E-8	2.32E-8	-1.07E-6	3.64E-6
AP	mol H+ eq	6.15E-1	1.39E-2	3.73E-3	6.33E-1	1.30E-3	4.36E-3	5.84E-4	1.66E-1	8.05E-1
EP-fw	kg P eq	3.20E-3	2.24E-5	2.45E-5	3.25E-3	1.88E-6	5.50E-6	9.67E-7	8.04E-4	4.06E-3
EP-m	kg N eq	9.45E-2	4.78E-3	7.03E-4	1.00E-1	4.66E-4	1.90E-3	3.60E-4	2.17E-2	1.24E-1
EP-T	mol N eq	1.05E+0	5.27E-2	6.64E-3	1.11E+0	5.14E-3	2.15E-2	2.36E-3	2.40E-1	1.38E+0
POCP	kg NMVOC eq	3.51E-1	1.50E-2	2.15E-3	3.69E-1	1.47E-3	5.83E-3	8.37E-4	6.96E-2	4.46E-1
ADP-mm	kg Sb eq	6.62E-4	5.62E-5	3.95E-5	7.58E-4	5.92E-6	4.25E-6	5.82E-7	-6.39E-3	-5.62E-3
ADP-f	MJ	1.83E+3	3.37E+1	6.46E+0	1.87E+3	3.51E+0	3.18E+0	1.77E+0	-6.71E+1	1.81E+3
WDP	m3 depriv.	3.81E+1	1.20E-1	1.79E-1	3.84E+1	1.08E-2	2.34E-2	9.12E-3	1.71E-1	3.86E+1
PM	disease inc.	6.62E-6	1.99E-7	3.54E-8	6.86E-6	2.07E-8	4.53E-8	1.15E-8	2.05E-6	8.99E-6
IR	kBq U-235 eq	1.96E+0	1.41E-1	9.20E-3	2.12E+0	1.54E-2	1.14E-2	9.42E-3	2.01E-1	2.35E+0
ETP-fw	CTUe	2.31E+3	3.00E+1	2.97E+1	2.37E+3	2.85E+0	1.34E+1	1.10E+3	5.66E+2	4.05E+3
HTP-c	CTUh	1.13E-7	9.82E-10	1.56E-9	1.16E-7	1.01E-10	4.43E-9	7.80E-11	3.70E-8	1.58E-7
HTP-nc	CTUh	2.13E-6	3.27E-8	3.72E-8	2.20E-6	3.40E-9	3.37E-8	1.64E-9	6.21E-7	2.86E-6
SQP	Pt	3.39E+2	2.89E+1	5.81E+0	3.74E+2	3.01E+0	2.08E+0	4.15E+0	-2.43E+2	1.40E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.34E+2	2.90E-3	4.51E+1	1.79E+2	5.04E-2	1.34E-1	1.29E-1	-1.31E+1	1.66E+2
PERM	MJ	0	4.17E-1	0	4.17E-1	0	0	0	0	4.17E-1
PERT	MJ	1.34E+2	4.20E-1	4.51E+1	1.79E+2	5.04E-2	1.34E-1	1.29E-1	-1.31E+1	1.67E+2
PENRE	MJ	1.95E+3	4.58E-1	6.95E+0	1.96E+3	3.73E+0	3.39E+0	1.87E+0	-8.64E+1	1.88E+3
PENRM	MJ	0	3.53E+1	0	3.53E+1	0	0	0	0	3.53E+1
PENRT	MJ	1.95E+3	3.58E+1	6.95E+0	2.00E+3	3.73E+0	3.39E+0	1.87E+0	-8.64E+1	1.92E+3
PET	MJ	2.09E+3	3.62E+1	5.21E+1	2.18E+3	3.78E+0	3.53E+0	2.00E+0	-9.95E+1	2.09E+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	9.46E-1	4.08E-3	4.95E-3	9.55E-1	3.97E-4	5.24E-3	2.22E-3	1.02E-1	1.07E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.24E-2	8.47E-5	6.98E-6	3.25E-2	8.98E-6	1.31E-5	2.10E-6	-1.33E-2	1.92E-2
NHWD	kg	1.56E+1	2.11E+0	1.15E-1	1.78E+1	2.18E-1	2.46E-1	6.99E+0	5.11E+0	3.04E+1
RWD	kg	2.00E-3	2.22E-4	1.02E-5	2.23E-3	2.39E-5	1.50E-5	1.18E-5	2.24E-4	2.50E-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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