Environmental Profile

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

Ecochain v3.5.80

Ecochain

Product:	4063872 - Tigris PEXc/Al/PE Pipe WT 20x2.0 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

WAVIN
An Orbia business.

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]

Statement of Confidentiality

This document and supporting material contain confidential and proprietary business information of Wavin - PL - MPC. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - PL - MPC.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.84E+1	1.19E+0	1.92E+0	8.15E+1	1.54E-1	2.37E+1	5.05E-1	9.05E+0	1.15E+2
GWP-f	kg CO2 eq	8.12E+1	1.19E+0	1.57E+0	8.40E+1	1.54E-1	2.01E+1	5.02E-1	8.07E+0	1.13E+2
GWP-b	kg CO2 eq	-3.03E+0	5.34E-4	3.49E-1	-2.68E+0	9.37E-5	3.62E+0	3.48E-3	9.07E-1	1.85E+0
GWP-luluc	kg CO2 eq	2.21E-1	4.43E-4	1.25E-3	2.23E-1	5.46E-5	8.95E-5	1.47E-5	7.45E-2	2.98E-1
ODP	kg CFC11 eq	3.36E-6	2.62E-7	9.01E-8	3.71E-6	3.56E-8	4.26E-8	1.58E-8	-6.36E-7	3.17E-6
AP	mol H+ eq	4.70E-1	7.47E-3	1.22E-2	4.90E-1	8.79E-4	3.13E-3	3.99E-4	1.25E-1	6.19E-1
EP-fw	kg P eq	2.74E-3	1.19E-5	7.07E-5	2.83E-3	1.27E-6	4.23E-6	6.77E-7	5.79E-4	3.41E-3
EP-m	kg N eq	7.38E-2	2.56E-3	1.51E-3	7.78E-2	3.14E-4	1.34E-3	2.40E-4	1.62E-2	9.60E-2
EP-T	mol N eq	8.26E-1	2.82E-2	1.67E-2	8.71E-1	3.47E-3	1.51E-2	1.62E-3	1.79E-1	1.07E+0
POCP	kg NMVOC eq	2.68E-1	8.01E-3	5.60E-3	2.82E-1	9.91E-4	4.13E-3	5.66E-4	5.19E-2	3.40E-1
ADP-mm	kg Sb eq	5.12E-4	2.98E-5	1.55E-4	6.97E-4	3.99E-6	3.89E-6	3.98E-7	-4.87E-3	-4.17E-3
ADP-f	MJ	1.32E+3	1.79E+1	1.34E+1	1.35E+3	2.37E+0	2.67E+0	1.21E+0	-2.18E+1	1.34E+3
WDP	m3 depriv.	2.62E+1	6.35E-2	4.66E-1	2.68E+1	7.27E-3	1.37E-2	6.27E-3	-2.41E-1	2.66E+1
PM	disease inc.	5.11E-6	1.06E-7	8.42E-8	5.30E-6	1.39E-8	3.43E-8	7.82E-9	1.51E-6	6.87E-6
IR	kBq U-235 eq	1.60E+0	7.51E-2	1.33E-2	1.69E+0	1.04E-2	1.00E-2	6.53E-3	1.34E-1	1.85E+0
ETP-fw	CTUe	1.81E+3	1.59E+1	9.92E+1	1.92E+3	1.92E+0	9.69E+0	8.35E+2	4.06E+2	3.18E+3
HTP-c	CTUh	8.72E-8	5.22E-10	5.10E-9	9.28E-8	6.84E-11	2.98E-9	5.60E-11	2.74E-8	1.23E-7
HTP-nc	CTUh	1.64E-6	1.73E-8	1.28E-7	1.78E-6	2.29E-9	2.28E-8	1.17E-9	4.64E-7	2.27E-6
SQP	Pt	4.60E+2	1.53E+1	1.86E+1	4.94E+2	2.03E+0	1.79E+0	2.80E+0	-3.79E+2	1.21E+2

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.31E+2	1.82E-3	1.87E+2	3.19E+2	3.40E-2	1.04E-1	9.24E-2	-4.05E+1	2.78E+2
PERM	MJ	0	2.21E-1	0	2.21E-1	0	0	0	0	2.21E-1
PERT	MJ	1.31E+2	2.23E-1	1.87E+2	3.19E+2	3.40E-2	1.04E-1	9.24E-2	-4.05E+1	2.78E+2
PENRE	MJ	1.41E+3	2.87E-1	1.44E+1	1.43E+3	2.51E+0	2.84E+0	1.28E+0	-3.29E+1	1.40E+3
PENRM	MJ	0	1.87E+1	0	1.87E+1	0	0	0	0	1.87E+1
PENRT	MJ	1.41E+3	1.90E+1	1.44E+1	1.44E+3	2.51E+0	2.84E+0	1.28E+0	-3.29E+1	1.42E+3
PET	MJ	1.54E+3	1.92E+1	2.01E+2	1.76E+3	2.55E+0	2.95E+0	1.37E+0	-7.35E+1	1.70E+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	6.95E-1	2.16E-3	1.30E-2	7.10E-1	2.68E-4	3.49E-3	1.52E-3	6.80E-2	7.83E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.47E-2	4.50E-5	5.13E-6	2.48E-2	6.06E-6	1.00E-5	1.43E-6	-1.01E-2	1.47E-2
NHWD	kg	1.30E+1	1.12E+0	9.11E-2	1.42E+1	1.47E-1	1.93E-1	4.71E+0	3.80E+0	2.31E+1
RWD	kg	1.70E-3	1.18E-4	7.51E-6	1.83E-3	1.61E-5	1.36E-5	8.09E-6	1.53E-4	2.02E-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