Environmental Profile

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

Ecochain v3.5.80

Product:	3061222 - PEXc/EVOH Pipe IV 18x2.5 L=50 CorBK
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]

Statement of Confidentiality

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.03E+1	9.02E-1	8.13E-1	2.20E+1	1.07E-1	2.74E+1	4.73E-1	-1.28E+1	3.72E+1
GWP-f	kg CO2 eq	2.73E+1	9.01E-1	5.06E-1	2.87E+1	1.07E-1	1.99E+1	4.73E-1	-1.39E+1	3.54E+1
GWP-b	kg CO2 eq	-7.00E+0	3.90E-4	3.07E-1	-6.69E+0	6.52E-5	7.46E+0	3.57E-4	1.08E+0	1.85E+0
GWP-luluc	kg CO2 eq	2.22E-2	3.41E-4	2.15E-4	2.28E-2	3.80E-5	8.79E-5	6.89E-6	-1.13E-2	1.16E-2
ODP	kg CFC11 eq	1.38E-6	1.98E-7	2.96E-8	1.61E-6	2.47E-8	4.02E-8	1.02E-8	-1.48E-6	2.03E-7
AP	mol H+ eq	1.13E-1	6.22E-3	1.96E-3	1.22E-1	6.12E-4	3.11E-3	2.43E-4	-2.01E-2	1.05E-1
EP-fw	kg P eq	7.86E-4	8.87E-6	1.32E-5	8.08E-4	8.84E-7	3.92E-6	3.17E-7	-1.52E-4	6.61E-4
EP-m	kg N eq	2.21E-2	2.07E-3	4.01E-4	2.46E-2	2.19E-4	1.34E-3	1.77E-4	-5.76E-3	2.06E-2
EP-T	mol N eq	2.48E-1	2.28E-2	3.68E-3	2.75E-1	2.41E-3	1.52E-2	9.85E-4	-6.53E-2	2.28E-1
POCP	kg NMVOC eq	9.74E-2	6.42E-3	1.18E-3	1.05E-1	6.90E-4	4.13E-3	3.85E-4	-2.09E-2	8.93E-2
ADP-mm	kg Sb eq	3.39E-4	2.22E-5	1.97E-5	3.81E-4	2.78E-6	3.90E-6	2.44E-7	-2.63E-5	3.62E-4
ADP-f	MJ	8.02E+2	1.35E+1	3.70E+0	8.19E+2	1.65E+0	2.52E+0	7.42E-1	-2.32E+2	5.92E+2
WDP	m3 depriv.	1.62E+1	4.73E-2	9.90E-2	1.64E+1	5.06E-3	4.82E-2	3.58E-3	-2.24E+0	1.42E+1
PM	disease inc.	1.14E-6	7.88E-8	1.99E-8	1.24E-6	9.69E-9	2.98E-8	5.10E-9	-2.56E-7	1.02E-6
IR	kBq U-235 eq	7.85E-1	5.67E-2	5.51E-3	8.47E-1	7.20E-3	9.89E-3	3.46E-3	-1.67E-1	7.00E-1
ETP-fw	CTUe	3.98E+2	1.19E+1	1.55E+1	4.26E+2	1.34E+0	8.05E+0	6.73E-1	-1.25E+2	3.11E+2
HTP-c	CTUh	1.13E-8	3.97E-10	8.18E-10	1.25E-8	4.76E-11	2.78E-9	1.82E-11	-3.97E-9	1.14E-8
HTP-nc	CTUh	2.25E-7	1.30E-8	1.92E-8	2.57E-7	1.60E-9	2.17E-8	4.21E-10	-5.37E-8	2.27E-7
SQP	Pt	6.98E+2	1.14E+1	3.06E+0	7.12E+2	1.41E+0	1.39E+0	1.90E+0	-6.90E+2	2.73E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.12E+2	3.05E-3	2.20E+1	1.34E+2	2.36E-2	1.02E-1	2.94E-2	-1.09E+2	2.50E+1
PERM	MJ	0	1.63E-1	0	1.63E-1	0	0	0	0	1.63E-1
PERT	MJ	1.12E+2	1.66E-1	2.20E+1	1.34E+2	2.36E-2	1.02E-1	2.94E-2	-1.09E+2	2.52E+1
PENRE	MJ	8.60E+2	5.01E-1	3.99E+0	8.64E+2	1.75E+0	2.68E+0	7.87E-1	-2.56E+2	6.13E+2
PENRM	MJ	0	1.38E+1	0	1.38E+1	0	0	0	0	1.38E+1
PENRT	MJ	8.60E+2	1.43E+1	3.99E+0	8.78E+2	1.75E+0	2.68E+0	7.87E-1	-2.56E+2	6.27E+2
PET	MJ	9.71E+2	1.45E+1	2.60E+1	1.01E+3	1.77E+0	2.79E+0	8.17E-1	-3.65E+2	6.52E+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	3.18E-1	1.61E-3	2.73E-3	3.22E-1	1.87E-4	4.34E-3	9.16E-4	-6.01E-2	2.68E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.32E-4	3.35E-5	4.39E-6	2.70E-4	4.22E-6	9.55E-6	8.92E-7	-3.01E-4	-1.65E-5
NHWD	kg	2.70E+0	8.28E-1	7.18E-2	3.60E+0	1.02E-1	1.94E-1	3.27E+0	-4.34E-1	6.73E+0
RWD	kg	8.25E-4	8.89E-5	6.42E-6	9.21E-4	1.12E-5	1.32E-5	4.85E-6	-1.95E-4	7.55E-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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