

Environmental Profile

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

Ecochain v3.5.80



Product: 3061218 - PEXc/EVOH Pipe IV 28x4.0 L=25 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					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	1.89E+1	1.11E+0	1.18E+0	2.12E+1	1.15E-1	2.97E+1	5.07E-1	-1.37E+1	3.78E+1
GWP-f	kg CO2 eq	2.70E+1	1.11E+0	8.54E-1	2.90E+1	1.15E-1	2.11E+1	5.07E-1	-1.47E+1	3.60E+1
GWP-b	kg CO2 eq	-8.12E+0	4.88E-4	3.27E-1	-7.79E+0	6.98E-5	8.58E+0	3.82E-4	9.94E-1	1.78E+0
GWP-luluc	kg CO2 eq	2.03E-2	4.17E-4	5.49E-4	2.12E-2	4.07E-5	8.91E-5	7.39E-6	-1.12E-2	1.02E-2
ODP	kg CFC11 eq	1.30E-6	2.45E-7	4.94E-8	1.59E-6	2.65E-8	4.07E-8	1.09E-8	-1.57E-6	1.03E-7
AP	mol H+ eq	1.10E-1	7.40E-3	5.24E-3	1.23E-1	6.55E-4	3.23E-3	2.60E-4	-2.12E-2	1.06E-1
EP-fw	kg P eq	6.75E-4	1.10E-5	3.17E-5	7.17E-4	9.46E-7	4.00E-6	3.39E-7	-1.53E-4	5.70E-4
EP-m	kg N eq	2.16E-2	2.49E-3	7.61E-4	2.49E-2	2.34E-4	1.40E-3	1.89E-4	-6.11E-3	2.06E-2
EP-T	mol N eq	2.42E-1	2.74E-2	7.91E-3	2.77E-1	2.58E-3	1.58E-2	1.05E-3	-6.93E-2	2.27E-1
POCP	kg NMVOC eq	9.84E-2	7.75E-3	2.61E-3	1.09E-1	7.38E-4	4.30E-3	4.13E-4	-2.25E-2	9.17E-2
ADP-mm	kg Sb eq	3.43E-4	2.75E-5	6.30E-5	4.34E-4	2.97E-6	3.85E-6	2.61E-7	-2.85E-5	4.12E-4
ADP-f	MJ	8.27E+2	1.67E+1	6.87E+0	8.51E+2	1.76E+0	2.55E+0	7.94E-1	-2.46E+2	6.10E+2
WDP	m3 depriv.	1.74E+1	5.87E-2	2.17E-1	1.77E+1	5.42E-3	4.94E-2	3.89E-3	-2.17E+0	1.55E+1
PM	disease inc.	1.12E-6	9.77E-8	4.07E-8	1.26E-6	1.04E-8	3.06E-8	5.46E-9	-2.70E-7	1.03E-6
IR	kBq U-235 eq	7.60E-1	6.99E-2	8.09E-3	8.38E-1	7.71E-3	9.99E-3	3.70E-3	-1.72E-1	6.87E-1
ETP-fw	CTUe	3.61E+2	1.48E+1	4.24E+1	4.18E+2	1.43E+0	8.19E+0	7.18E-1	-1.24E+2	3.04E+2
HTP-c	CTUh	1.16E-8	4.89E-10	2.19E-9	1.43E-8	5.10E-11	2.96E-9	1.95E-11	-4.38E-9	1.29E-8
HTP-nc	CTUh	2.19E-7	1.61E-8	5.40E-8	2.89E-7	1.71E-9	2.29E-8	4.50E-10	-5.61E-8	2.58E-7
SQP	Pt	7.82E+2	1.41E+1	8.06E+0	8.04E+2	1.51E+0	1.41E+0	2.04E+0	-7.56E+2	5.30E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.23E+2	2.92E-3	7.49E+1	1.98E+2	2.53E-2	1.04E-1	3.14E-2	-1.18E+2	8.00E+1
PERM	MJ	0	2.03E-1	0	2.03E-1	0	0	0	0	2.03E-1
PERT	MJ	1.23E+2	2.06E-1	7.49E+1	1.99E+2	2.53E-2	1.04E-1	3.14E-2	-1.18E+2	8.02E+1
PENRE	MJ	8.87E+2	4.80E-1	7.36E+0	8.95E+2	1.87E+0	2.72E+0	8.43E-1	-2.71E+2	6.29E+2
PENRM	MJ	0	1.72E+1	0	1.72E+1	0	0	0	0	1.72E+1
PENRT	MJ	8.87E+2	1.77E+1	7.36E+0	9.12E+2	1.87E+0	2.72E+0	8.43E-1	-2.71E+2	6.46E+2
PET	MJ	1.01E+3	1.79E+1	8.23E+1	1.11E+3	1.90E+0	2.82E+0	8.74E-1	-3.90E+2	7.26E+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	3.16E-1	2.00E-3	6.04E-3	3.24E-1	2.00E-4	4.55E-3	9.81E-4	-5.87E-2	2.71E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.34E-4	4.15E-5	4.71E-6	2.80E-4	4.51E-6	9.82E-6	9.56E-7	-3.21E-4	-2.49E-5
NHWD	kg	2.62E+0	1.03E+0	7.94E-2	3.73E+0	1.09E-1	1.92E-1	3.50E+0	-4.77E-1	7.06E+0
RWD	kg	7.84E-4	1.10E-4	6.89E-6	9.01E-4	1.20E-5	1.33E-5	5.19E-6	-2.03E-4	7.28E-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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