

Environmental Profile

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

Ecochain v3.5.80



Product: 3061221 - PEXc/EVOH Pipe IV 15x2.5 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					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	1.66E+1	7.10E-1	5.77E-1	1.79E+1	8.41E-2	2.09E+1	3.70E-1	-9.93E+0	2.93E+1
GWP-f	kg CO2 eq	2.15E+1	7.09E-1	3.42E-1	2.25E+1	8.40E-2	1.56E+1	3.71E-1	-1.08E+1	2.78E+1
GWP-b	kg CO2 eq	-4.88E+0	3.04E-4	2.35E-1	-4.64E+0	5.10E-5	5.27E+0	2.80E-4	8.67E-1	1.49E+0
GWP-luluc	kg CO2 eq	1.77E-2	2.69E-4	1.18E-4	1.80E-2	2.97E-5	6.79E-5	5.37E-6	-8.68E-3	9.47E-3
ODP	kg CFC11 eq	1.07E-6	1.56E-7	2.01E-8	1.24E-6	1.94E-8	3.11E-8	7.95E-9	-1.15E-6	1.53E-7
AP	mol H+ eq	8.85E-2	4.98E-3	1.04E-3	9.45E-2	4.79E-4	2.42E-3	1.90E-4	-1.53E-2	8.23E-2
EP-fw	kg P eq	6.45E-4	6.96E-6	7.55E-6	6.60E-4	6.91E-7	3.04E-6	2.47E-7	-1.17E-4	5.46E-4
EP-m	kg N eq	1.72E-2	1.65E-3	2.59E-4	1.91E-2	1.71E-4	1.05E-3	1.39E-4	-4.39E-3	1.61E-2
EP-T	mol N eq	1.93E-1	1.82E-2	2.24E-3	2.14E-1	1.89E-3	1.18E-2	7.70E-4	-4.97E-2	1.79E-1
POCP	kg NMVOC eq	7.56E-2	5.11E-3	7.12E-4	8.14E-2	5.40E-4	3.21E-3	3.01E-4	-1.59E-2	6.96E-2
ADP-mm	kg Sb eq	2.63E-4	1.74E-5	8.95E-6	2.89E-4	2.17E-6	3.02E-6	1.91E-7	-1.94E-5	2.75E-4
ADP-f	MJ	6.28E+2	1.06E+1	2.41E+0	6.41E+2	1.29E+0	1.94E+0	5.80E-1	-1.81E+2	4.65E+2
WDP	m3 depriv.	1.27E+1	3.71E-2	5.95E-2	1.28E+1	3.96E-3	3.79E-2	2.72E-3	-1.76E+0	1.11E+1
PM	disease inc.	8.77E-7	6.18E-8	1.24E-8	9.51E-7	7.59E-9	2.31E-8	3.99E-9	-1.92E-7	7.94E-7
IR	kBq U-235 eq	6.18E-1	4.46E-2	3.90E-3	6.66E-1	5.64E-3	7.60E-3	2.71E-3	-1.28E-1	5.54E-1
ETP-fw	CTUe	3.13E+2	9.37E+0	8.11E+0	3.30E+2	1.05E+0	6.32E+0	5.27E-1	-9.70E+1	2.41E+2
HTP-c	CTUh	8.52E-9	3.13E-10	4.35E-10	9.27E-9	3.73E-11	2.12E-9	1.42E-11	-2.91E-9	8.53E-9
HTP-nc	CTUh	1.75E-7	1.02E-8	9.86E-9	1.95E-7	1.25E-9	1.68E-8	3.29E-10	-4.07E-8	1.73E-7
SQP	Pt	4.99E+2	8.91E+0	1.65E+0	5.09E+2	1.10E+0	1.06E+0	1.49E+0	-5.03E+2	1.00E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.11E+1	2.67E-3	9.41E+0	9.05E+1	1.85E-2	7.92E-2	2.30E-2	-8.00E+1	1.06E+1
PERM	MJ	0	1.28E-1	0	1.28E-1	0	0	0	0	1.28E-1
PERT	MJ	8.11E+1	1.31E-1	9.41E+0	9.06E+1	1.85E-2	7.92E-2	2.30E-2	-8.00E+1	1.08E+1
PENRE	MJ	6.74E+2	4.38E-1	2.60E+0	6.77E+2	1.37E+0	2.07E+0	6.16E-1	-1.99E+2	4.81E+2
PENRM	MJ	0	1.08E+1	0	1.08E+1	0	0	0	0	1.08E+1
PENRT	MJ	6.74E+2	1.13E+1	2.60E+0	6.88E+2	1.37E+0	2.07E+0	6.16E-1	-1.99E+2	4.92E+2
PET	MJ	7.55E+2	1.14E+1	1.20E+1	7.78E+2	1.39E+0	2.15E+0	6.39E-1	-2.79E+2	5.03E+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	2.49E-1	1.26E-3	1.64E-3	2.52E-1	1.46E-4	3.39E-3	7.17E-4	-4.71E-2	2.09E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.78E-4	2.62E-5	3.36E-6	2.07E-4	3.30E-6	7.36E-6	6.97E-7	-2.33E-4	-1.39E-5
NHWD	kg	2.08E+0	6.49E-1	5.46E-2	2.78E+0	7.99E-2	1.49E-1	2.56E+0	-3.19E-1	5.25E+0
RWD	kg	6.50E-4	6.99E-5	4.91E-6	7.25E-4	8.77E-6	1.01E-5	3.80E-6	-1.49E-4	5.98E-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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