

Environmental Profile

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

Ecochain v3.5.80



Product: 3061216 - PEXc/EVOH Pipe IV 18x2.5 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



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	2.53E+1	1.54E+0	3.11E+0	2.99E+1	1.35E-1	2.99E+1	5.92E-1	-1.55E+1	4.50E+1
GWP-f	kg CO2 eq	2.98E+1	1.54E+0	2.79E+0	3.42E+1	1.35E-1	2.46E+1	5.92E-1	-1.64E+1	4.31E+1
GWP-b	kg CO2 eq	-4.58E+0	6.59E-4	3.11E-1	-4.27E+0	8.18E-5	5.26E+0	4.48E-4	8.47E-1	1.84E+0
GWP-luluc	kg CO2 eq	2.06E-2	5.86E-4	2.53E-3	2.37E-2	4.77E-5	8.82E-5	8.69E-6	-8.72E-3	1.51E-2
ODP	kg CFC11 eq	1.18E-6	3.39E-7	1.59E-7	1.68E-6	3.10E-8	3.98E-8	1.27E-8	-1.73E-6	3.05E-8
AP	mol H+ eq	1.12E-1	1.09E-2	2.48E-2	1.48E-1	7.67E-4	3.47E-3	3.05E-4	-1.92E-2	1.33E-1
EP-fw	kg P eq	8.66E-4	1.51E-5	1.41E-4	1.02E-3	1.11E-6	4.11E-6	3.99E-7	-1.22E-4	9.05E-4
EP-m	kg N eq	2.14E-2	3.60E-3	2.82E-3	2.78E-2	2.74E-4	1.52E-3	2.27E-4	-5.68E-3	2.42E-2
EP-T	mol N eq	2.42E-1	3.97E-2	3.25E-2	3.15E-1	3.02E-3	1.72E-2	1.24E-3	-6.38E-2	2.72E-1
POCP	kg NMVOC eq	1.02E-1	1.12E-2	1.09E-2	1.24E-1	8.65E-4	4.65E-3	4.83E-4	-2.05E-2	1.10E-1
ADP-mm	kg Sb eq	3.52E-4	3.77E-5	3.23E-4	7.13E-4	3.48E-6	3.37E-6	3.06E-7	-2.07E-5	7.00E-4
ADP-f	MJ	9.45E+2	2.31E+1	2.49E+1	9.93E+2	2.07E+0	2.36E+0	9.31E-1	-2.73E+2	7.25E+2
WDP	m3 depriv.	2.06E+1	8.05E-2	9.09E-1	2.16E+1	6.34E-3	5.59E-2	4.63E-3	-1.92E+0	1.98E+1
PM	disease inc.	1.04E-6	1.34E-7	1.61E-7	1.33E-6	1.22E-8	3.13E-8	6.39E-9	-2.03E-7	1.18E-6
IR	kBq U-235 eq	8.16E-1	9.68E-2	2.16E-2	9.35E-1	9.03E-3	8.84E-3	4.34E-3	-1.52E-1	8.05E-1
ETP-fw	CTUe	3.12E+2	2.03E+1	2.02E+2	5.35E+2	1.68E+0	9.36E+0	8.57E-1	-1.03E+2	4.44E+2
HTP-c	CTUh	1.07E-8	6.81E-10	1.04E-8	2.18E-8	5.97E-11	3.41E-9	2.29E-11	-3.27E-9	2.20E-8
HTP-nc	CTUh	2.21E-7	2.21E-8	2.61E-7	5.05E-7	2.00E-9	2.61E-8	5.32E-10	-4.54E-8	4.88E-7
SQP	Pt	4.95E+2	1.93E+1	3.77E+1	5.52E+2	1.77E+0	1.21E+0	2.39E+0	-5.02E+2	5.49E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.50E+1	6.09E-3	3.93E+2	4.78E+2	2.97E-2	1.06E-1	3.68E-2	-7.96E+1	3.99E+2
PERM	MJ	0	2.77E-1	0	2.77E-1	0	0	0	0	2.77E-1
PERT	MJ	8.50E+1	2.83E-1	3.93E+2	4.78E+2	2.97E-2	1.06E-1	3.68E-2	-7.96E+1	3.99E+2
PENRE	MJ	1.01E+3	1.00E+0	2.65E+1	1.04E+3	2.19E+0	2.52E+0	9.88E-1	-3.02E+2	7.45E+2
PENRM	MJ	0	2.35E+1	0	2.35E+1	0	0	0	0	2.35E+1
PENRT	MJ	1.01E+3	2.45E+1	2.65E+1	1.07E+3	2.19E+0	2.52E+0	9.88E-1	-3.02E+2	7.69E+2
PET	MJ	1.10E+3	2.48E+1	4.19E+2	1.54E+3	2.22E+0	2.63E+0	1.02E+0	-3.82E+2	1.17E+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	3.49E-1	2.74E-3	2.54E-2	3.77E-1	2.34E-4	5.11E-3	1.15E-3	-5.16E-2	3.32E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.18E-4	5.70E-5	4.78E-6	2.80E-4	5.29E-6	1.00E-5	1.12E-6	-3.45E-4	-4.86E-5
NHWD	kg	2.37E+0	1.41E+0	9.44E-2	3.87E+0	1.28E-1	1.93E-1	4.10E+0	-3.52E-1	7.94E+0
RWD	kg	8.28E-4	1.52E-4	6.99E-6	9.87E-4	1.41E-5	1.14E-5	6.08E-6	-1.84E-4	8.35E-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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