

Environmental Profile

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

Ecochain v3.5.80



Product: 3061214 - PEXc/EVOH Pipe IV 12x2.0 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



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	1.30E+1	8.47E-1	1.32E+0	1.52E+1	7.07E-2	1.83E+1	3.10E-1	-8.30E+0	2.56E+1
GWP-f	kg CO2 eq	1.76E+1	8.47E-1	1.12E+0	1.96E+1	7.06E-2	1.30E+1	3.10E-1	-9.14E+0	2.39E+1
GWP-b	kg CO2 eq	-4.64E+0	3.56E-4	1.99E-1	-4.44E+0	4.29E-5	5.26E+0	2.35E-4	8.48E-1	1.67E+0
GWP-luluc	kg CO2 eq	1.67E-2	3.24E-4	9.42E-4	1.80E-2	2.50E-5	6.49E-5	4.56E-6	-8.49E-3	9.61E-3
ODP	kg CFC11 eq	7.77E-7	1.86E-7	6.41E-8	1.03E-6	1.63E-8	2.98E-8	6.68E-9	-9.78E-7	1.02E-7
AP	mol H+ eq	6.71E-2	6.24E-3	9.19E-3	8.26E-2	4.02E-4	2.14E-3	1.60E-4	-1.40E-2	7.12E-2
EP-fw	kg P eq	6.58E-4	8.24E-6	5.28E-5	7.19E-4	5.81E-7	2.85E-6	2.09E-7	-1.14E-4	6.09E-4
EP-m	kg N eq	1.33E-2	2.03E-3	1.10E-3	1.64E-2	1.44E-4	9.19E-4	1.21E-4	-3.99E-3	1.36E-2
EP-T	mol N eq	1.52E-1	2.24E-2	1.24E-2	1.86E-1	1.59E-3	1.03E-2	6.48E-4	-4.53E-2	1.54E-1
POCP	kg NMVOC eq	6.01E-2	6.28E-3	4.15E-3	7.05E-2	4.53E-4	2.82E-3	2.53E-4	-1.44E-2	5.96E-2
ADP-mm	kg Sb eq	2.11E-4	2.06E-5	1.18E-4	3.49E-4	1.83E-6	2.92E-6	1.61E-7	-1.88E-5	3.35E-4
ADP-f	MJ	5.26E+2	1.27E+1	9.74E+0	5.49E+2	1.08E+0	1.83E+0	4.88E-1	-1.53E+2	3.99E+2
WDP	m3 depriv.	1.12E+1	4.39E-2	3.45E-1	1.16E+1	3.33E-3	3.45E-2	2.43E-3	-1.67E+0	9.95E+0
PM	disease inc.	6.49E-7	7.31E-8	6.19E-8	7.84E-7	6.37E-9	2.08E-8	3.35E-9	-1.86E-7	6.29E-7
IR	kBq U-235 eq	5.17E-1	5.31E-2	9.15E-3	5.79E-1	4.74E-3	7.26E-3	2.28E-3	-1.20E-1	4.73E-1
ETP-fw	CTUe	2.36E+2	1.11E+1	7.49E+1	3.22E+2	8.80E-1	6.05E+0	4.55E-1	-9.35E+1	2.36E+2
HTP-c	CTUh	7.13E-9	3.75E-10	3.84E-9	1.13E-8	3.13E-11	1.90E-9	1.20E-11	-2.79E-9	1.05E-8
HTP-nc	CTUh	1.41E-7	1.20E-8	9.65E-8	2.49E-7	1.05E-9	1.47E-8	2.80E-10	-3.88E-8	2.26E-7
SQP	Pt	4.74E+2	1.05E+1	1.40E+1	4.99E+2	9.27E-1	1.01E+0	1.25E+0	-4.99E+2	3.34E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.80E+1	4.06E-3	1.43E+2	2.21E+2	1.56E-2	7.45E-2	1.93E-2	-7.93E+1	1.42E+2
PERM	MJ	0	1.51E-1	0	1.51E-1	0	0	0	0	1.51E-1
PERT	MJ	7.80E+1	1.55E-1	1.43E+2	2.21E+2	1.56E-2	7.45E-2	1.93E-2	-7.93E+1	1.42E+2
PENRE	MJ	5.65E+2	6.68E-1	1.04E+1	5.76E+2	1.15E+0	1.95E+0	5.18E-1	-1.69E+2	4.11E+2
PENRM	MJ	0	1.28E+1	0	1.28E+1	0	0	0	0	1.28E+1
PENRT	MJ	5.65E+2	1.34E+1	1.04E+1	5.89E+2	1.15E+0	1.95E+0	5.18E-1	-1.69E+2	4.23E+2
PET	MJ	6.43E+2	1.36E+1	1.53E+2	8.10E+2	1.17E+0	2.02E+0	5.37E-1	-2.48E+2	5.65E+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	2.01E-1	1.50E-3	9.63E-3	2.12E-1	1.23E-4	2.96E-3	6.03E-4	-4.49E-2	1.71E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.47E-4	3.10E-5	2.96E-6	1.81E-4	2.77E-6	6.77E-6	5.88E-7	-1.99E-4	-7.93E-6
NHWD	kg	1.59E+0	7.64E-1	5.41E-2	2.41E+0	6.72E-2	1.33E-1	2.15E+0	-3.07E-1	4.45E+0
RWD	kg	5.43E-4	8.34E-5	4.33E-6	6.31E-4	7.37E-6	9.72E-6	3.19E-6	-1.38E-4	5.13E-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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