

Environmental Profile

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

Ecochain v3.5.80



Product: 3061217 - PEXc/EVOH Pipe IV 22x3.0 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	3.60E+1	2.25E+0	3.16E+0	4.14E+1	1.99E-1	4.37E+1	8.73E-1	-2.29E+1	6.33E+1
GWP-f	kg CO2 eq	4.26E+1	2.25E+0	2.69E+0	4.76E+1	1.98E-1	3.63E+1	8.73E-1	-2.40E+1	6.09E+1
GWP-b	kg CO2 eq	-6.62E+0	9.76E-4	4.67E-1	-6.15E+0	1.20E-4	7.45E+0	6.60E-4	1.06E+0	2.36E+0
GWP-luluc	kg CO2 eq	2.68E-2	8.47E-4	2.27E-3	2.99E-2	7.02E-5	1.22E-4	1.28E-5	-1.14E-2	1.87E-2
ODP	kg CFC11 eq	1.66E-6	4.94E-7	1.54E-7	2.31E-6	4.57E-8	5.48E-8	1.88E-8	-2.53E-6	-1.06E-7
AP	mol H+ eq	1.61E-1	1.53E-2	2.22E-2	1.98E-1	1.13E-3	4.99E-3	4.49E-4	-2.72E-2	1.78E-1
EP-fw	kg P eq	1.10E-3	2.21E-5	1.27E-4	1.25E-3	1.63E-6	5.75E-6	5.87E-7	-1.63E-4	1.10E-3
EP-m	kg N eq	3.06E-2	5.11E-3	2.64E-3	3.83E-2	4.04E-4	2.20E-3	3.31E-4	-8.12E-3	3.31E-2
EP-T	mol N eq	3.45E-1	5.64E-2	2.98E-2	4.31E-1	4.46E-3	2.49E-2	1.82E-3	-9.12E-2	3.71E-1
POCP	kg NMVOC eq	1.48E-1	1.59E-2	1.00E-2	1.74E-1	1.27E-3	6.71E-3	7.12E-4	-2.94E-2	1.53E-1
ADP-mm	kg Sb eq	5.09E-4	5.53E-5	2.86E-4	8.50E-4	5.13E-6	4.51E-6	4.52E-7	-2.87E-5	8.32E-4
ADP-f	MJ	1.38E+3	3.37E+1	2.34E+1	1.43E+3	3.05E+0	3.27E+0	1.37E+0	-4.01E+2	1.04E+3
WDP	m3 depriv.	3.02E+1	1.18E-1	8.32E-1	3.12E+1	9.35E-3	7.93E-2	6.83E-3	-2.56E+0	2.87E+1
PM	disease inc.	1.50E-6	1.97E-7	1.49E-7	1.84E-6	1.79E-8	4.44E-8	9.42E-9	-2.77E-7	1.64E-6
IR	kBq U-235 eq	1.15E+0	1.41E-1	2.19E-2	1.31E+0	1.33E-2	1.21E-2	6.39E-3	-2.11E-1	1.13E+0
ETP-fw	CTUe	4.22E+2	2.98E+1	1.81E+2	6.33E+2	2.47E+0	1.31E+1	1.25E+0	-1.36E+2	5.14E+2
HTP-c	CTUh	1.54E-8	9.89E-10	9.27E-9	2.56E-8	8.80E-11	4.99E-9	3.38E-11	-4.64E-9	2.61E-8
HTP-nc	CTUh	3.13E-7	3.23E-8	2.33E-7	5.79E-7	2.95E-9	3.80E-8	7.82E-10	-6.25E-8	5.58E-7
SQP	Pt	7.00E+2	2.84E+1	3.38E+1	7.62E+2	2.61E+0	1.67E+0	3.52E+0	-6.91E+2	7.90E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.19E+2	7.04E-3	3.46E+2	4.65E+2	4.37E-2	1.48E-1	5.42E-2	-1.09E+2	3.57E+2
PERM	MJ	0	4.08E-1	0	4.08E-1	0	0	0	0	4.08E-1
PERT	MJ	1.19E+2	4.15E-1	3.46E+2	4.66E+2	4.37E-2	1.48E-1	5.42E-2	-1.09E+2	3.57E+2
PENRE	MJ	1.48E+3	1.16E+0	2.50E+1	1.50E+3	3.23E+0	3.49E+0	1.46E+0	-4.43E+2	1.07E+3
PENRM	MJ	0	3.46E+1	0	3.46E+1	0	0	0	0	3.46E+1
PENRT	MJ	1.48E+3	3.58E+1	2.50E+1	1.54E+3	3.23E+0	3.49E+0	1.46E+0	-4.43E+2	1.10E+3
PET	MJ	1.59E+3	3.62E+1	3.71E+2	2.00E+3	3.28E+0	3.64E+0	1.51E+0	-5.52E+2	1.46E+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	5.00E-1	4.02E-3	2.32E-2	5.28E-1	3.45E-4	7.41E-3	1.69E-3	-6.87E-2	4.68E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.10E-4	8.36E-5	6.95E-6	4.01E-4	7.79E-6	1.42E-5	1.65E-6	-5.05E-4	-8.06E-5
NHWD	kg	3.36E+0	2.07E+0	1.27E-1	5.56E+0	1.89E-1	2.76E-1	6.04E+0	-4.96E-1	1.16E+1
RWD	kg	1.15E-3	2.22E-4	1.02E-5	1.38E-3	2.07E-5	1.55E-5	8.96E-6	-2.58E-4	1.17E-3
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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