

Environmental Profile

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

Ecochain v3.5.80



Product: 3059361 - PERT/EVOH Pipe IV 16x2.0 L=200
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	3.58E+1	1.20E+0	1.20E+0	3.82E+1	1.93E-1	3.72E+1	8.50E-1	-2.17E+1	5.47E+1
GWP-f	kg CO2 eq	3.71E+1	1.20E+0	7.82E-1	3.91E+1	1.93E-1	3.51E+1	8.51E-1	-2.27E+1	5.26E+1
GWP-b	kg CO2 eq	-1.40E+0	4.71E-4	4.21E-1	-9.81E-1	1.17E-4	2.05E+0	6.44E-4	1.04E+0	2.11E+0
GWP-luluc	kg CO2 eq	2.26E-2	4.74E-4	3.84E-4	2.34E-2	6.84E-5	1.07E-4	1.23E-5	-8.74E-3	1.49E-2
ODP	kg CFC11 eq	1.11E-6	2.63E-7	4.56E-8	1.42E-6	4.45E-8	4.84E-8	1.83E-8	-2.39E-6	-8.58E-7
AP	mol H+ eq	1.38E-1	1.01E-2	3.57E-3	1.51E-1	1.10E-3	4.65E-3	4.37E-4	-2.19E-2	1.36E-1
EP-fw	kg P eq	7.03E-4	1.14E-5	2.31E-5	7.37E-4	1.59E-6	5.23E-6	5.68E-7	-1.27E-4	6.18E-4
EP-m	kg N eq	2.47E-2	3.17E-3	6.44E-4	2.85E-2	3.94E-4	2.06E-3	3.27E-4	-6.67E-3	2.46E-2
EP-T	mol N eq	2.74E-1	3.50E-2	6.17E-3	3.15E-1	4.34E-3	2.33E-2	1.77E-3	-7.42E-2	2.70E-1
POCP	kg NMVOC eq	1.25E-1	9.72E-3	2.00E-3	1.37E-1	1.24E-3	6.28E-3	6.93E-4	-2.34E-2	1.22E-1
ADP-mm	kg Sb eq	4.29E-4	2.83E-5	3.89E-5	4.96E-4	5.00E-6	3.78E-6	4.38E-7	-1.61E-5	4.89E-4
ADP-f	MJ	1.27E+3	1.79E+1	5.90E+0	1.30E+3	2.97E+0	2.76E+0	1.34E+0	-3.79E+2	9.25E+2
WDP	m3 depriv.	2.90E+1	6.06E-2	1.67E-1	2.93E+1	9.11E-3	7.77E-2	6.18E-3	-2.31E+0	2.70E+1
PM	disease inc.	1.20E-6	1.01E-7	3.27E-8	1.33E-6	1.74E-8	4.06E-8	9.17E-9	-1.78E-7	1.22E-6
IR	kBq U-235 eq	8.90E-1	7.50E-2	8.18E-3	9.73E-1	1.30E-2	9.82E-3	6.23E-3	-1.73E-1	8.29E-1
ETP-fw	CTUe	3.57E+2	1.55E+1	2.86E+1	4.01E+2	2.41E+0	1.28E+1	1.23E+0	-1.13E+2	3.04E+2
HTP-c	CTUh	1.13E-8	5.37E-10	1.49E-9	1.33E-8	8.57E-11	4.50E-9	3.26E-11	-2.65E-9	1.53E-8
HTP-nc	CTUh	2.51E-7	1.67E-8	3.58E-8	3.04E-7	2.87E-9	3.57E-8	7.62E-10	-4.54E-8	2.98E-7
SQP	Pt	2.22E+2	1.44E+1	5.55E+0	2.42E+2	2.54E+0	1.28E+0	3.42E+0	-3.09E+2	-5.94E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.91E+1	9.74E-3	4.47E+1	9.39E+1	4.26E-2	1.33E-1	5.31E-2	-5.16E+1	4.25E+1
PERM	MJ	0	2.05E-1	0	2.05E-1	0	0	0	0	2.05E-1
PERT	MJ	4.91E+1	2.15E-1	4.47E+1	9.41E+1	4.26E-2	1.33E-1	5.31E-2	-5.16E+1	4.27E+1
PENRE	MJ	1.37E+3	1.60E+0	6.35E+0	1.37E+3	3.15E+0	2.95E+0	1.42E+0	-4.19E+2	9.62E+2
PENRM	MJ	0	1.74E+1	0	1.74E+1	0	0	0	0	1.74E+1
PENRT	MJ	1.37E+3	1.90E+1	6.35E+0	1.39E+3	3.15E+0	2.95E+0	1.42E+0	-4.19E+2	9.79E+2
PET	MJ	1.41E+3	1.92E+1	5.11E+1	1.48E+3	3.19E+0	3.08E+0	1.47E+0	-4.71E+2	1.02E+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	4.68E-1	2.07E-3	4.62E-3	4.75E-1	3.36E-4	7.07E-3	1.65E-3	-6.14E-2	4.23E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.03E-4	4.28E-5	6.02E-6	2.52E-4	7.59E-6	1.26E-5	1.60E-6	-4.64E-4	-1.90E-4
NHWD	kg	1.61E+0	1.04E+0	9.92E-2	2.75E+0	1.84E-1	2.34E-1	5.88E+0	-2.81E-1	8.77E+0
RWD	kg	8.09E-4	1.18E-4	8.80E-6	9.36E-4	2.02E-5	1.23E-5	8.73E-6	-2.12E-4	7.65E-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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