

Environmental Profile

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

Ecochain v3.5.80



Product: 4066382 - PERT/EVOH/PERT Pipe IV 20x2.0 L=120 Pro5
 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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	2.08E+1	1.04E+0	5.93E+0	2.77E+1	1.47E-1	3.73E+1	6.44E-1	-1.74E+1	4.84E+1
GWP-f	kg CO2 eq	3.04E+1	1.04E+0	5.56E+0	3.70E+1	1.47E-1	2.70E+1	6.45E-1	-1.86E+1	4.61E+1
GWP-b	kg CO2 eq	-9.64E+0	4.02E-4	3.64E-1	-9.27E+0	8.91E-5	1.03E+1	4.88E-4	1.21E+0	2.25E+0
GWP-luluc	kg CO2 eq	2.37E-2	4.13E-4	5.27E-3	2.94E-2	5.19E-5	1.16E-4	9.46E-6	-1.36E-2	1.59E-2
ODP	kg CFC11 eq	1.08E-6	2.28E-7	3.16E-7	1.63E-6	3.38E-8	5.27E-8	1.39E-8	-1.99E-6	-2.60E-7
AP	mol H+ eq	1.18E-1	8.95E-3	5.18E-2	1.78E-1	8.36E-4	4.13E-3	3.32E-4	-2.63E-2	1.57E-1
EP-fw	kg P eq	6.41E-4	9.84E-6	2.93E-4	9.44E-4	1.21E-6	5.20E-6	4.34E-7	-1.86E-4	7.64E-4
EP-m	kg N eq	2.22E-2	2.78E-3	5.72E-3	3.07E-2	2.99E-4	1.79E-3	2.47E-4	-7.59E-3	2.54E-2
EP-T	mol N eq	2.47E-1	3.07E-2	6.68E-2	3.44E-1	3.29E-3	2.02E-2	1.35E-3	-8.61E-2	2.83E-1
POCP	kg NMVOC eq	1.09E-1	8.51E-3	2.25E-2	1.40E-1	9.42E-4	5.48E-3	5.26E-4	-2.79E-2	1.19E-1
ADP-mm	kg Sb eq	3.79E-4	2.44E-5	6.83E-4	1.09E-3	3.79E-6	4.84E-6	3.34E-7	-3.46E-5	1.06E-3
ADP-f	MJ	1.00E+3	1.54E+1	5.03E+1	1.07E+3	2.25E+0	3.23E+0	1.01E+0	-3.12E+2	7.64E+2
WDP	m3 depriv.	2.29E+1	5.22E-2	1.87E+0	2.48E+1	6.91E-3	6.56E-2	5.04E-3	-2.68E+0	2.22E+1
PM	disease inc.	1.15E-6	8.70E-8	3.30E-7	1.56E-6	1.32E-8	3.87E-8	6.96E-9	-3.28E-7	1.29E-6
IR	kBq U-235 eq	7.63E-1	6.49E-2	4.14E-2	8.70E-1	9.84E-3	1.26E-2	4.72E-3	-2.13E-1	6.84E-1
ETP-fw	CTUe	3.68E+2	1.34E+1	4.24E+2	8.05E+2	1.83E+0	1.11E+1	9.35E-1	-1.51E+2	6.68E+2
HTP-c	CTUh	1.31E-8	4.66E-10	2.17E-8	3.53E-8	6.51E-11	3.84E-9	2.50E-11	-5.34E-9	3.39E-8
HTP-nc	CTUh	2.31E-7	1.44E-8	5.48E-7	7.94E-7	2.18E-9	2.95E-8	5.80E-10	-6.87E-8	7.58E-7
SQP	Pt	9.04E+2	1.24E+1	7.89E+1	9.95E+2	1.93E+0	1.77E+0	2.60E+0	-9.11E+2	9.05E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.45E+2	9.04E-3	8.32E+2	9.76E+2	3.23E-2	1.36E-1	4.01E-2	-1.43E+2	8.34E+2
PERM	MJ	0	1.76E-1	0	1.76E-1	0	0	0	0	1.76E-1
PERT	MJ	1.45E+2	1.85E-1	8.32E+2	9.77E+2	3.23E-2	1.36E-1	4.01E-2	-1.43E+2	8.34E+2
PENRE	MJ	1.08E+3	1.47E+0	5.36E+1	1.13E+3	2.39E+0	3.44E+0	1.08E+0	-3.45E+2	7.94E+2
PENRM	MJ	0	1.49E+1	0	1.49E+1	0	0	0	0	1.49E+1
PENRT	MJ	1.08E+3	1.64E+1	5.36E+1	1.15E+3	2.39E+0	3.44E+0	1.08E+0	-3.45E+2	8.09E+2
PET	MJ	1.22E+3	1.66E+1	8.85E+2	2.12E+3	2.42E+0	3.58E+0	1.12E+0	-4.87E+2	1.64E+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	3.86E-1	1.78E-3	5.24E-2	4.40E-1	2.55E-4	5.87E-3	1.25E-3	-7.22E-2	3.75E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.25E-4	3.69E-5	5.94E-6	2.68E-4	5.76E-6	1.25E-5	1.22E-6	-4.05E-4	-1.18E-4
NHWD	kg	1.78E+0	8.95E-1	1.32E-1	2.81E+0	1.40E-1	2.50E-1	4.46E+0	-5.80E-1	7.08E+0
RWD	kg	7.15E-4	1.02E-4	8.68E-6	8.26E-4	1.53E-5	1.67E-5	6.63E-6	-2.52E-4	6.13E-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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