

Environmental Profile

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

Ecochain v3.5.80



Product: 3084064 - PERT/EVOH/PERT Pipe IV 18x2.0 L=120
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	2.50E+1	8.87E-1	1.39E+0	2.73E+1	1.35E-1	2.66E+1	5.92E-1	-1.57E+1	3.90E+1
GWP-f	kg CO2 eq	2.64E+1	8.86E-1	1.10E+0	2.84E+1	1.35E-1	2.50E+1	5.92E-1	-1.59E+1	3.82E+1
GWP-b	kg CO2 eq	-1.38E+0	3.32E-4	2.87E-1	-1.09E+0	8.18E-5	1.60E+0	4.48E-4	2.56E-1	7.58E-1
GWP-luluc	kg CO2 eq	1.35E-2	3.56E-4	8.35E-4	1.47E-2	4.77E-5	6.76E-5	8.69E-6	-3.01E-3	1.18E-2
ODP	kg CFC11 eq	7.64E-7	1.94E-7	6.31E-8	1.02E-6	3.11E-8	2.91E-8	1.28E-8	-1.67E-6	-5.73E-7
AP	mol H+ eq	9.83E-2	7.96E-3	8.09E-3	1.14E-1	7.68E-4	3.12E-3	3.05E-4	-1.37E-2	1.05E-1
EP-fw	kg P eq	4.96E-4	8.30E-6	4.74E-5	5.51E-4	1.11E-6	3.32E-6	3.99E-7	-5.07E-5	5.05E-4
EP-m	kg N eq	1.73E-2	2.44E-3	1.04E-3	2.07E-2	2.75E-4	1.40E-3	2.26E-4	-4.31E-3	1.83E-2
EP-T	mol N eq	1.94E-1	2.70E-2	1.13E-2	2.32E-1	3.03E-3	1.58E-2	1.24E-3	-4.77E-2	2.04E-1
POCP	kg NMVOC eq	8.99E-2	7.46E-3	3.78E-3	1.01E-1	8.65E-4	4.24E-3	4.83E-4	-1.55E-2	9.11E-2
ADP-mm	kg Sb eq	3.03E-4	2.05E-5	1.02E-4	4.25E-4	3.49E-6	1.87E-6	3.07E-7	-9.20E-6	4.22E-4
ADP-f	MJ	9.01E+2	1.31E+1	9.26E+0	9.23E+2	2.07E+0	1.65E+0	9.32E-1	-2.66E+2	6.62E+2
WDP	m3 depriv.	2.07E+1	4.40E-2	3.15E-1	2.11E+1	6.35E-3	5.16E-2	4.63E-3	-9.81E-1	2.02E+1
PM	disease inc.	8.45E-7	7.34E-8	5.73E-8	9.76E-7	1.22E-8	2.61E-8	6.40E-9	-8.76E-8	9.33E-7
IR	kBq U-235 eq	6.16E-1	5.51E-2	9.56E-3	6.81E-1	9.04E-3	5.53E-3	4.34E-3	-9.59E-2	6.04E-1
ETP-fw	CTUe	2.09E+2	1.14E+1	6.58E+1	2.86E+2	1.68E+0	8.23E+0	8.57E-1	-4.54E+1	2.51E+2
HTP-c	CTUh	8.41E-9	3.98E-10	3.38E-9	1.22E-8	5.98E-11	3.34E-9	2.30E-11	-1.73E-9	1.39E-8
HTP-nc	CTUh	1.78E-7	1.22E-8	8.44E-8	2.75E-7	2.00E-9	2.53E-8	5.32E-10	-2.38E-8	2.79E-7
SQP	Pt	1.71E+2	1.04E+1	1.24E+1	1.94E+2	1.77E+0	7.81E-1	2.39E+0	-1.57E+2	4.12E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.56E+1	8.78E-3	1.23E+2	1.58E+2	2.97E-2	8.48E-2	3.69E-2	-2.46E+1	1.34E+2
PERM	MJ	0	1.48E-1	0	1.48E-1	0	0	0	0	1.48E-1
PERT	MJ	3.56E+1	1.56E-1	1.23E+2	1.58E+2	2.97E-2	8.48E-2	3.69E-2	-2.46E+1	1.34E+2
PENRE	MJ	9.67E+2	1.43E+0	9.90E+0	9.78E+2	2.20E+0	1.77E+0	9.88E-1	-2.95E+2	6.89E+2
PENRM	MJ	0	1.25E+1	0	1.25E+1	0	0	0	0	1.25E+1
PENRT	MJ	9.67E+2	1.39E+1	9.90E+0	9.91E+2	2.20E+0	1.77E+0	9.88E-1	-2.95E+2	7.01E+2
PET	MJ	1.00E+3	1.41E+1	1.32E+2	1.15E+3	2.23E+0	1.85E+0	1.03E+0	-3.19E+2	8.35E+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	3.42E-1	1.50E-3	8.76E-3	3.52E-1	2.34E-4	4.89E-3	1.15E-3	-2.61E-2	3.32E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.41E-4	3.11E-5	4.19E-6	1.76E-4	5.29E-6	8.18E-6	1.12E-6	-3.25E-4	-1.34E-4
NHWD	kg	1.15E+0	7.50E-1	7.30E-2	1.98E+0	1.28E-1	1.80E-1	4.10E+0	-1.76E-1	6.21E+0
RWD	kg	5.57E-4	8.67E-5	6.12E-6	6.50E-4	1.41E-5	6.66E-6	6.09E-6	-1.26E-4	5.51E-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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