

Environmental Profile

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

Ecochain v3.5.80



Product: 3084059 - PERT/EVOH/PERT Pipe IV 14x2.0 L=600
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	9.05E+1	3.33E+0	3.63E+0	9.75E+1	5.06E-1	1.00E+2	2.22E+0	-5.85E+1	1.42E+2
GWP-f	kg CO2 eq	9.75E+1	3.32E+0	2.54E+0	1.03E+2	5.06E-1	9.28E+1	2.22E+0	-5.89E+1	1.40E+2
GWP-b	kg CO2 eq	-7.00E+0	1.25E-3	1.09E+0	-5.91E+0	3.07E-4	7.58E+0	1.68E-3	3.77E-1	2.05E+0
GWP-luluc	kg CO2 eq	3.87E-2	1.33E-3	1.52E-3	4.15E-2	1.79E-4	2.34E-4	3.26E-5	-8.07E-3	3.39E-2
ODP	kg CFC11 eq	2.79E-6	7.26E-7	1.48E-7	3.67E-6	1.17E-7	1.00E-7	4.79E-8	-6.17E-6	-2.24E-6
AP	mol H+ eq	3.62E-1	2.99E-2	1.44E-2	4.06E-1	2.88E-3	1.13E-2	1.15E-3	-4.96E-2	3.72E-1
EP-fw	kg P eq	1.79E-3	3.11E-5	8.88E-5	1.91E-3	4.16E-6	1.17E-5	1.50E-6	-1.50E-4	1.78E-3
EP-m	kg N eq	6.32E-2	9.17E-3	2.22E-3	7.46E-2	1.03E-3	5.08E-3	8.50E-4	-1.58E-2	6.58E-2
EP-T	mol N eq	7.10E-1	1.01E-1	2.25E-2	8.34E-1	1.14E-2	5.77E-2	4.64E-3	-1.75E-1	7.33E-1
POCP	kg NMVOC eq	3.32E-1	2.80E-2	7.41E-3	3.67E-1	3.25E-3	1.54E-2	1.81E-3	-5.77E-2	3.30E-1
ADP-mm	kg Sb eq	1.12E-3	7.70E-5	1.70E-4	1.37E-3	1.31E-5	5.73E-6	1.15E-6	-3.44E-5	1.36E-3
ADP-f	MJ	3.34E+3	4.92E+1	2.01E+1	3.41E+3	7.77E+0	5.58E+0	3.50E+0	-9.84E+2	2.45E+3
WDP	m3 depriv.	7.66E+1	1.65E-1	6.17E-1	7.74E+1	2.38E-2	1.87E-1	1.74E-2	-2.85E+0	7.48E+1
PM	disease inc.	3.12E-6	2.75E-7	1.17E-7	3.51E-6	4.57E-8	9.25E-8	2.40E-8	-3.04E-7	3.37E-6
IR	kBq U-235 eq	2.26E+0	2.07E-1	2.48E-2	2.50E+0	3.39E-2	1.83E-2	1.63E-2	-3.31E-1	2.23E+0
ETP-fw	CTUe	7.01E+2	4.26E+1	1.17E+2	8.60E+2	6.31E+0	2.95E+1	3.22E+0	-1.32E+2	7.67E+2
HTP-c	CTUh	3.17E-8	1.49E-9	6.04E-9	3.92E-8	2.24E-10	1.23E-8	8.62E-11	-6.77E-9	4.51E-8
HTP-nc	CTUh	6.56E-7	4.56E-8	1.48E-7	8.50E-7	7.52E-9	9.29E-8	2.00E-9	-8.27E-8	8.69E-7
SQP	Pt	7.66E+2	3.90E+1	2.23E+1	8.27E+2	6.64E+0	2.55E+0	8.97E+0	-6.15E+2	2.30E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.49E+2	3.30E-2	2.00E+2	3.50E+2	1.11E-1	2.98E-1	1.38E-1	-9.27E+1	2.58E+2
PERM	MJ	0	5.53E-1	0	5.53E-1	0	0	0	0	5.53E-1
PERT	MJ	1.49E+2	5.86E-1	2.00E+2	3.50E+2	1.11E-1	2.98E-1	1.38E-1	-9.27E+1	2.58E+2
PENRE	MJ	3.59E+3	5.35E+0	2.16E+1	3.61E+3	8.25E+0	5.98E+0	3.71E+0	-1.09E+3	2.54E+3
PENRM	MJ	0	4.69E+1	0	4.69E+1	0	0	0	0	4.69E+1
PENRT	MJ	3.59E+3	5.23E+1	2.16E+1	3.66E+3	8.25E+0	5.98E+0	3.71E+0	-1.09E+3	2.59E+3
PET	MJ	3.74E+3	5.28E+1	2.22E+2	4.01E+3	8.36E+0	6.28E+0	3.85E+0	-1.18E+3	2.85E+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	1.26E+0	5.63E-3	1.71E-2	1.28E+0	8.79E-4	1.79E-2	4.32E-3	-7.71E-2	1.22E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.25E-4	1.17E-4	1.57E-5	6.57E-4	1.99E-5	2.89E-5	4.21E-6	-1.21E-3	-5.00E-4
NHWD	kg	4.21E+0	2.81E+0	2.62E-1	7.28E+0	4.81E-1	6.00E-1	1.54E+1	-6.80E-1	2.31E+1
RWD	kg	2.05E-3	3.25E-4	2.29E-5	2.40E-3	5.28E-5	2.14E-5	2.29E-5	-4.45E-4	2.05E-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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