

Environmental Profile

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

Ecochain v3.5.80



Product: 3084063 - PERT/EVOH/PERT Pipe IV 14x2.0 L=90
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	1.40E+1	5.10E-1	1.60E+0	1.61E+1	7.60E-2	1.60E+1	3.34E-1	-9.03E+0	2.35E+1
GWP-f	kg CO2 eq	1.54E+1	5.09E-1	1.44E+0	1.74E+1	7.59E-2	1.44E+1	3.34E-1	-9.28E+0	2.29E+1
GWP-b	kg CO2 eq	-1.43E+0	1.92E-4	1.64E-1	-1.27E+0	4.61E-5	1.60E+0	2.53E-4	2.58E-1	5.87E-1
GWP-luluc	kg CO2 eq	7.53E-3	2.04E-4	1.30E-3	9.03E-3	2.69E-5	4.47E-5	4.90E-6	-2.80E-3	6.30E-3
ODP	kg CFC11 eq	4.66E-7	1.11E-7	8.18E-8	6.59E-7	1.75E-8	1.93E-8	7.19E-9	-9.75E-7	-2.72E-7
AP	mol H+ eq	5.81E-2	4.54E-3	1.27E-2	7.53E-2	4.33E-4	1.88E-3	1.72E-4	-8.96E-3	6.88E-2
EP-fw	kg P eq	3.02E-4	4.78E-6	7.22E-5	3.79E-4	6.25E-7	2.11E-6	2.25E-7	-4.28E-5	3.39E-4
EP-m	kg N eq	1.04E-2	1.40E-3	1.45E-3	1.32E-2	1.55E-4	8.35E-4	1.28E-4	-2.75E-3	1.16E-2
EP-T	mol N eq	1.16E-1	1.55E-2	1.67E-2	1.48E-1	1.71E-3	9.46E-3	6.97E-4	-3.06E-2	1.29E-1
POCP	kg NMVOC eq	5.31E-2	4.27E-3	5.61E-3	6.30E-2	4.88E-4	2.54E-3	2.72E-4	-9.93E-3	5.64E-2
ADP-mm	kg Sb eq	1.79E-4	1.18E-5	1.66E-4	3.57E-4	1.96E-6	1.43E-6	1.73E-7	-7.51E-6	3.53E-4
ADP-f	MJ	5.20E+2	7.55E+0	1.28E+1	5.40E+2	1.17E+0	1.14E+0	5.25E-1	-1.55E+2	3.88E+2
WDP	m3 depriv.	1.20E+1	2.53E-2	4.66E-1	1.25E+1	3.58E-3	3.11E-2	2.60E-3	-7.52E-1	1.18E+1
PM	disease inc.	5.11E-7	4.22E-8	8.27E-8	6.36E-7	6.86E-9	1.63E-8	3.61E-9	-7.22E-8	5.90E-7
IR	kBq U-235 eq	3.66E-1	3.17E-2	1.12E-2	4.09E-1	5.10E-3	4.01E-3	2.45E-3	-6.62E-2	3.54E-1
ETP-fw	CTUe	1.39E+2	6.54E+0	1.04E+2	2.49E+2	9.47E-1	4.99E+0	4.83E-1	-3.69E+1	2.19E+2
HTP-c	CTUh	5.18E-9	2.29E-10	5.31E-9	1.07E-8	3.37E-11	1.94E-9	1.29E-11	-1.29E-9	1.14E-8
HTP-nc	CTUh	1.07E-7	7.00E-9	1.34E-7	2.48E-7	1.13E-9	1.48E-8	3.00E-10	-1.78E-8	2.46E-7
SQP	Pt	1.56E+2	5.99E+0	1.93E+1	1.82E+2	9.97E-1	5.81E-1	1.35E+0	-1.55E+2	3.00E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.92E+1	4.95E-3	2.01E+2	2.31E+2	1.67E-2	5.44E-2	2.08E-2	-2.44E+1	2.06E+2
PERM	MJ	0	8.50E-2	0	8.50E-2	0	0	0	0	8.50E-2
PERT	MJ	2.92E+1	9.00E-2	2.01E+2	2.31E+2	1.67E-2	5.44E-2	2.08E-2	-2.44E+1	2.06E+2
PENRE	MJ	5.58E+2	8.03E-1	1.36E+1	5.72E+2	1.24E+0	1.22E+0	5.57E-1	-1.72E+2	4.03E+2
PENRM	MJ	0	7.21E+0	0	7.21E+0	0	0	0	0	7.21E+0
PENRT	MJ	5.58E+2	8.01E+0	1.36E+1	5.79E+2	1.24E+0	1.22E+0	5.57E-1	-1.72E+2	4.10E+2
PET	MJ	5.87E+2	8.10E+0	2.15E+2	8.10E+2	1.25E+0	1.27E+0	5.78E-1	-1.96E+2	6.17E+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	2.01E-1	8.65E-4	1.30E-2	2.14E-1	1.32E-4	2.88E-3	6.48E-4	-2.00E-2	1.98E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.82E-5	1.79E-5	2.52E-6	1.09E-4	2.98E-6	5.16E-6	6.32E-7	-1.92E-4	-7.42E-5
NHWD	kg	7.28E-1	4.32E-1	4.95E-2	1.21E+0	7.23E-2	1.22E-1	2.31E+0	-1.34E-1	3.58E+0
RWD	kg	3.32E-4	4.99E-5	3.68E-6	3.86E-4	7.93E-6	5.02E-6	3.43E-6	-8.36E-5	3.19E-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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