

Environmental Profile

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

Ecochain v3.5.80



Product: 3071154 - PERT/EVOH/PERT Pipe IV 16x2.0 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	2.19E+1	7.80E-1	1.18E+0	2.39E+1	1.18E-1	2.36E+1	5.19E-1	-1.38E+1	3.43E+1
GWP-f	kg CO2 eq	2.33E+1	7.79E-1	9.21E-1	2.50E+1	1.18E-1	2.20E+1	5.19E-1	-1.41E+1	3.36E+1
GWP-b	kg CO2 eq	-1.39E+0	2.93E-4	2.55E-1	-1.14E+0	7.16E-5	1.60E+0	3.93E-4	2.57E-1	7.13E-1
GWP-luluc	kg CO2 eq	1.02E-2	3.13E-4	6.86E-4	1.12E-2	4.18E-5	6.12E-5	7.56E-6	-2.96E-3	8.31E-3
ODP	kg CFC11 eq	6.72E-7	1.70E-7	5.29E-8	8.95E-7	2.72E-8	2.63E-8	1.12E-8	-1.47E-6	-5.15E-7
AP	mol H+ eq	8.67E-2	6.99E-3	6.64E-3	1.00E-1	6.72E-4	2.78E-3	2.67E-4	-1.24E-2	9.17E-2
EP-fw	kg P eq	4.39E-4	7.30E-6	3.90E-5	4.86E-4	9.71E-7	2.98E-6	3.48E-7	-4.86E-5	4.41E-4
EP-m	kg N eq	1.53E-2	2.15E-3	8.63E-4	1.83E-2	2.40E-4	1.24E-3	1.99E-4	-3.87E-3	1.61E-2
EP-T	mol N eq	1.71E-1	2.37E-2	9.38E-3	2.04E-1	2.65E-3	1.40E-2	1.08E-3	-4.30E-2	1.79E-1
POCP	kg NMVOC eq	7.93E-2	6.56E-3	3.12E-3	8.90E-2	7.57E-4	3.76E-3	4.23E-4	-1.40E-2	7.99E-2
ADP-mm	kg Sb eq	2.68E-4	1.81E-5	8.31E-5	3.69E-4	3.05E-6	1.75E-6	2.68E-7	-8.74E-6	3.65E-4
ADP-f	MJ	7.93E+2	1.15E+1	7.71E+0	8.13E+2	1.81E+0	1.51E+0	8.15E-1	-2.35E+2	5.81E+2
WDP	m3 depriv.	1.83E+1	3.87E-2	2.60E-1	1.85E+1	5.56E-3	4.63E-2	3.89E-3	-9.18E-1	1.77E+1
PM	disease inc.	7.49E-7	6.45E-8	4.75E-8	8.61E-7	1.06E-8	2.33E-8	5.60E-9	-8.33E-8	8.17E-7
IR	kBq U-235 eq	5.45E-1	4.85E-2	8.10E-3	6.02E-1	7.92E-3	5.10E-3	3.80E-3	-8.77E-2	5.31E-1
ETP-fw	CTUe	1.88E+2	1.00E+1	5.39E+1	2.52E+2	1.47E+0	7.31E+0	7.51E-1	-4.30E+1	2.18E+2
HTP-c	CTUh	7.35E-9	3.50E-10	2.77E-9	1.05E-8	5.23E-11	2.85E-9	2.00E-11	-1.61E-9	1.18E-8
HTP-nc	CTUh	1.58E-7	1.07E-8	6.91E-8	2.38E-7	1.75E-9	2.21E-8	4.65E-10	-2.22E-8	2.40E-7
SQP	Pt	1.67E+2	9.15E+0	1.02E+1	1.86E+2	1.55E+0	7.25E-1	2.09E+0	-1.57E+2	3.37E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.38E+1	7.69E-3	9.98E+1	1.34E+2	2.60E-2	7.63E-2	3.23E-2	-2.45E+1	1.09E+2
PERM	MJ	0	1.30E-1	0	1.30E-1	0	0	0	0	1.30E-1
PERT	MJ	3.38E+1	1.38E-1	9.98E+1	1.34E+2	2.60E-2	7.63E-2	3.23E-2	-2.45E+1	1.09E+2
PENRE	MJ	8.51E+2	1.25E+0	8.25E+0	8.61E+2	1.92E+0	1.61E+0	8.65E-1	-2.61E+2	6.05E+2
PENRM	MJ	0	1.10E+1	0	1.10E+1	0	0	0	0	1.10E+1
PENRT	MJ	8.51E+2	1.23E+1	8.25E+0	8.72E+2	1.92E+0	1.61E+0	8.65E-1	-2.61E+2	6.16E+2
PET	MJ	8.85E+2	1.24E+1	1.08E+2	1.01E+3	1.95E+0	1.69E+0	8.97E-1	-2.85E+2	7.25E+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	3.01E-1	1.32E-3	7.24E-3	3.10E-1	2.05E-4	4.33E-3	1.01E-3	-2.44E-2	2.91E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.26E-4	2.73E-5	3.71E-6	1.57E-4	4.63E-6	7.25E-6	9.80E-7	-2.88E-4	-1.19E-4
NHWD	kg	1.03E+0	6.60E-1	6.43E-2	1.75E+0	1.12E-1	1.63E-1	3.59E+0	-1.64E-1	5.45E+0
RWD	kg	4.93E-4	7.63E-5	5.43E-6	5.75E-4	1.23E-5	6.20E-6	5.33E-6	-1.14E-4	4.85E-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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