

Environmental Profile

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

Ecochain v3.5.80



Product: 3071155 - PERT/EVOH/PERT Pipe IV 16x2.0 L=240
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	4.31E+1	1.55E+0	9.14E+0	5.38E+1	2.36E-1	4.62E+1	1.04E+0	-2.73E+1	7.40E+1
GWP-f	kg CO2 eq	4.56E+1	1.55E+0	8.71E+0	5.58E+1	2.36E-1	4.34E+1	1.04E+0	-2.76E+1	7.29E+1
GWP-b	kg CO2 eq	-2.47E+0	5.80E-4	4.23E-1	-2.04E+0	1.43E-4	2.78E+0	7.86E-4	2.78E-1	1.01E+0
GWP-luluc	kg CO2 eq	2.30E-2	6.21E-4	8.40E-3	3.20E-2	8.35E-5	1.11E-4	1.51E-5	-4.10E-3	2.82E-2
ODP	kg CFC11 eq	1.29E-6	3.38E-7	4.94E-7	2.12E-6	5.44E-8	4.75E-8	2.23E-8	-2.89E-6	-6.43E-7
AP	mol H+ eq	1.69E-1	1.39E-2	8.27E-2	2.65E-1	1.34E-3	5.33E-3	5.34E-4	-2.31E-2	2.49E-1
EP-fw	kg P eq	8.39E-4	1.45E-5	4.66E-4	1.32E-3	1.94E-6	5.54E-6	6.95E-7	-7.39E-5	1.25E-3
EP-m	kg N eq	2.95E-2	4.27E-3	9.02E-3	4.28E-2	4.81E-4	2.39E-3	3.97E-4	-7.32E-3	3.87E-2
EP-T	mol N eq	3.31E-1	4.72E-2	1.06E-1	4.84E-1	5.30E-3	2.71E-2	2.16E-3	-8.10E-2	4.38E-1
POCP	kg NMVOC eq	1.54E-1	1.30E-2	3.58E-2	2.03E-1	1.51E-3	7.24E-3	8.46E-4	-2.65E-2	1.86E-1
ADP-mm	kg Sb eq	5.22E-4	3.58E-5	1.09E-3	1.65E-3	6.10E-6	2.81E-6	5.36E-7	-1.50E-5	1.65E-3
ADP-f	MJ	1.56E+3	2.29E+1	7.92E+1	1.66E+3	3.62E+0	2.65E+0	1.63E+0	-4.61E+2	1.21E+3
WDP	m3 depriv.	3.59E+1	7.68E-2	2.97E+0	3.89E+1	1.11E-2	8.87E-2	7.79E-3	-1.46E+0	3.76E+1
PM	disease inc.	1.45E-6	1.28E-7	5.22E-7	2.10E-6	2.13E-8	4.37E-8	1.12E-8	-1.38E-7	2.03E-6
IR	kBq U-235 eq	1.06E+0	9.62E-2	6.39E-2	1.22E+0	1.58E-2	8.70E-3	7.60E-3	-1.56E-1	1.09E+0
ETP-fw	CTUe	3.36E+2	1.98E+1	6.77E+2	1.03E+3	2.94E+0	1.39E+1	1.50E+0	-6.64E+1	9.85E+2
HTP-c	CTUh	1.42E-8	6.96E-10	3.46E-8	4.95E-8	1.05E-10	5.59E-9	3.99E-11	-2.94E-9	5.23E-8
HTP-nc	CTUh	3.05E-7	2.12E-8	8.75E-7	1.20E-6	3.51E-9	4.31E-8	9.30E-10	-3.83E-8	1.21E-6
SQP	Pt	2.95E+2	1.81E+1	1.26E+2	4.39E+2	3.10E+0	1.21E+0	4.18E+0	-2.49E+2	1.98E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.10E+1	1.54E-2	1.33E+3	1.39E+3	5.20E-2	1.41E-1	6.47E-2	-3.81E+1	1.35E+3
PERM	MJ	0	2.57E-1	0	2.57E-1	0	0	0	0	2.57E-1
PERT	MJ	6.10E+1	2.73E-1	1.33E+3	1.39E+3	5.20E-2	1.41E-1	6.47E-2	-3.81E+1	1.35E+3
PENRE	MJ	1.68E+3	2.50E+0	8.44E+1	1.76E+3	3.85E+0	2.84E+0	1.73E+0	-5.11E+2	1.26E+3
PENRM	MJ	0	2.18E+1	0	2.18E+1	0	0	0	0	2.18E+1
PENRT	MJ	1.68E+3	2.43E+1	8.44E+1	1.79E+3	3.85E+0	2.84E+0	1.73E+0	-5.11E+2	1.28E+3
PET	MJ	1.74E+3	2.46E+1	1.42E+3	3.18E+3	3.90E+0	2.98E+0	1.79E+0	-5.49E+2	2.64E+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	5.87E-1	2.62E-3	8.31E-2	6.73E-1	4.10E-4	8.42E-3	2.01E-3	-3.91E-2	6.44E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.41E-4	5.42E-5	7.25E-6	3.02E-4	9.26E-6	1.35E-5	1.96E-6	-5.64E-4	-2.37E-4
NHWD	kg	1.94E+0	1.31E+0	1.75E-1	3.43E+0	2.24E-1	2.84E-1	7.18E+0	-2.95E-1	1.08E+1
RWD	kg	9.57E-4	1.51E-4	1.06E-5	1.12E-3	2.46E-5	1.03E-5	1.07E-5	-2.09E-4	9.55E-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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