

Environmental Profile

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

Ecochain v3.5.80



Product: 3061243 - PERT/EVOH Pipe IV 16x2.0 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	1.01E+2	3.61E+0	5.07E+0	1.10E+2	5.81E-1	1.17E+2	2.55E+0	-6.78E+1	1.62E+2
GWP-f	kg CO2 eq	1.11E+2	3.61E+0	3.82E+0	1.19E+2	5.81E-1	1.06E+2	2.55E+0	-6.79E+1	1.60E+2
GWP-b	kg CO2 eq	-9.89E+0	1.41E-3	1.25E+0	-8.64E+0	3.53E-4	1.04E+1	1.94E-3	7.77E-2	1.85E+0
GWP-luluc	kg CO2 eq	5.48E-2	1.42E-3	2.66E-3	5.89E-2	2.06E-4	2.64E-4	3.71E-5	-7.68E-3	5.17E-2
ODP	kg CFC11 eq	3.12E-6	7.90E-7	2.20E-7	4.13E-6	1.34E-7	1.12E-7	5.49E-8	-7.10E-6	-2.67E-6
AP	mol H+ eq	4.10E-1	3.04E-2	2.56E-2	4.66E-1	3.31E-3	1.29E-2	1.31E-3	-5.71E-2	4.26E-1
EP-fw	kg P eq	2.01E-3	3.42E-5	1.52E-4	2.20E-3	4.78E-6	1.33E-5	1.71E-6	-1.53E-4	2.06E-3
EP-m	kg N eq	7.15E-2	9.51E-3	3.50E-3	8.45E-2	1.18E-3	5.80E-3	9.82E-4	-1.82E-2	7.43E-2
EP-T	mol N eq	8.04E-1	1.05E-1	3.72E-2	9.46E-1	1.30E-2	6.59E-2	5.32E-3	-2.02E-1	8.28E-1
POCP	kg NMVOC eq	3.78E-1	2.92E-2	1.23E-2	4.20E-1	3.73E-3	1.76E-2	2.08E-3	-6.71E-2	3.76E-1
ADP-mm	kg Sb eq	1.28E-3	8.50E-5	3.15E-4	1.68E-3	1.50E-5	6.00E-6	1.32E-6	-4.14E-5	1.66E-3
ADP-f	MJ	3.83E+3	5.36E+1	3.14E+1	3.92E+3	8.91E+0	6.18E+0	4.01E+0	-1.13E+3	2.80E+3
WDP	m3 depriv.	8.73E+1	1.82E-1	1.03E+0	8.85E+1	2.74E-2	2.17E-1	1.86E-2	-2.83E+0	8.60E+1
PM	disease inc.	3.54E-6	3.03E-7	1.90E-7	4.03E-6	5.24E-8	1.04E-7	2.75E-8	-3.49E-7	3.87E-6
IR	kBq U-235 eq	2.62E+0	2.25E-1	3.48E-2	2.88E+0	3.90E-2	2.01E-2	1.87E-2	-3.71E-1	2.59E+0
ETP-fw	CTUe	7.33E+2	4.67E+1	2.08E+2	9.87E+2	7.24E+0	3.36E+1	3.70E+0	-1.32E+2	9.00E+2
HTP-c	CTUh	3.52E-8	1.61E-9	1.07E-8	4.75E-8	2.58E-10	1.33E-8	9.78E-11	-8.25E-9	5.30E-8
HTP-nc	CTUh	7.42E-7	5.02E-8	2.65E-7	1.06E-6	8.63E-9	1.04E-7	2.29E-9	-9.36E-8	1.08E-6
SQP	Pt	1.02E+3	4.32E+1	3.92E+1	1.10E+3	7.63E+0	2.81E+0	1.03E+1	-7.74E+2	3.49E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.91E+2	2.92E-2	3.77E+2	5.68E+2	1.28E-1	3.38E-1	1.60E-1	-1.14E+2	4.54E+2
PERM	MJ	0	6.15E-1	0	6.15E-1	0	0	0	0	6.15E-1
PERT	MJ	1.91E+2	6.44E-1	3.77E+2	5.69E+2	1.28E-1	3.38E-1	1.60E-1	-1.14E+2	4.55E+2
PENRE	MJ	4.11E+3	4.79E+0	3.36E+1	4.15E+3	9.46E+0	6.61E+0	4.26E+0	-1.26E+3	2.91E+3
PENRM	MJ	0	5.21E+1	0	5.21E+1	0	0	0	0	5.21E+1
PENRT	MJ	4.11E+3	5.69E+1	3.36E+1	4.20E+3	9.46E+0	6.61E+0	4.26E+0	-1.26E+3	2.97E+3
PET	MJ	4.30E+3	5.76E+1	4.10E+2	4.77E+3	9.59E+0	6.95E+0	4.41E+0	-1.37E+3	3.42E+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	1.40E+0	6.21E-3	2.86E-2	1.43E+0	1.01E-3	2.06E-2	4.96E-3	-7.74E-2	1.38E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.00E-4	1.29E-4	1.81E-5	7.47E-4	2.28E-5	3.19E-5	4.82E-6	-1.40E-3	-5.91E-4
NHWD	kg	4.70E+0	3.13E+0	3.09E-1	8.13E+0	5.52E-1	6.62E-1	1.77E+1	-8.26E-1	2.62E+1
RWD	kg	2.38E-3	3.54E-4	2.65E-5	2.76E-3	6.06E-5	2.33E-5	2.62E-5	-5.06E-4	2.36E-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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