

Environmental Profile

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

Ecochain v3.5.80



Product: 3071156 - PERT/EVOH/PERT 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	1.06E+2	3.87E+0	3.53E+0	1.14E+2	5.90E-1	1.16E+2	2.59E+0	-6.82E+1	1.64E+2
GWP-f	kg CO2 eq	1.13E+2	3.86E+0	2.26E+0	1.19E+2	5.90E-1	1.08E+2	2.59E+0	-6.86E+1	1.62E+2
GWP-b	kg CO2 eq	-6.93E+0	1.45E-3	1.26E+0	-5.67E+0	3.58E-4	7.58E+0	1.96E-3	3.75E-1	2.29E+0
GWP-luluc	kg CO2 eq	5.57E-2	1.55E-3	1.07E-3	5.83E-2	2.09E-4	2.66E-4	3.78E-5	-8.37E-3	5.05E-2
ODP	kg CFC11 eq	3.18E-6	8.44E-7	1.32E-7	4.16E-6	1.36E-7	1.14E-7	5.58E-8	-7.18E-6	-2.71E-6
AP	mol H+ eq	4.18E-1	3.47E-2	9.92E-3	4.63E-1	3.36E-3	1.31E-2	1.33E-3	-5.65E-2	4.24E-1
EP-fw	kg P eq	2.06E-3	3.62E-5	6.48E-5	2.16E-3	4.85E-6	1.34E-5	1.74E-6	-1.61E-4	2.02E-3
EP-m	kg N eq	7.29E-2	1.07E-2	1.85E-3	8.55E-2	1.20E-3	5.89E-3	9.93E-4	-1.81E-2	7.55E-2
EP-T	mol N eq	8.19E-1	1.18E-1	1.75E-2	9.55E-1	1.32E-2	6.69E-2	5.41E-3	-2.00E-1	8.41E-1
POCP	kg NMVOC eq	3.84E-1	3.26E-2	5.67E-3	4.22E-1	3.79E-3	1.78E-2	2.12E-3	-6.58E-2	3.80E-1
ADP-mm	kg Sb eq	1.30E-3	8.95E-5	1.06E-4	1.49E-3	1.53E-5	6.32E-6	1.34E-6	-3.69E-5	1.48E-3
ADP-f	MJ	3.89E+3	5.72E+1	1.70E+1	3.96E+3	9.06E+0	6.29E+0	4.08E+0	-1.14E+3	2.84E+3
WDP	m3 depriv.	8.91E+1	1.92E-1	4.73E-1	8.98E+1	2.78E-2	2.18E-1	1.95E-2	-3.18E+0	8.69E+1
PM	disease inc.	3.58E-6	3.20E-7	9.33E-8	4.00E-6	5.33E-8	1.06E-7	2.80E-8	-3.26E-7	3.86E-6
IR	kBq U-235 eq	2.62E+0	2.40E-1	2.40E-2	2.88E+0	3.96E-2	2.04E-2	1.90E-2	-3.75E-1	2.59E+0
ETP-fw	CTUe	7.96E+2	4.95E+1	7.91E+1	9.24E+2	7.35E+0	3.42E+1	3.75E+0	-1.44E+2	8.25E+2
HTP-c	CTUh	3.55E-8	1.74E-9	4.15E-9	4.14E-8	2.62E-10	1.39E-8	9.99E-11	-7.42E-9	4.82E-8
HTP-nc	CTUh	7.56E-7	5.30E-8	9.90E-8	9.08E-7	8.77E-9	1.07E-7	2.33E-9	-9.14E-8	9.34E-7
SQP	Pt	7.87E+2	4.53E+1	1.54E+1	8.48E+2	7.75E+0	2.82E+0	1.05E+1	-6.20E+2	2.49E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.59E+2	3.85E-2	1.21E+2	2.80E+2	1.30E-1	3.42E-1	1.62E-1	-9.30E+1	1.88E+2
PERM	MJ	0	6.43E-1	0	6.43E-1	0	0	0	0	6.43E-1
PERT	MJ	1.59E+2	6.81E-1	1.21E+2	2.81E+2	1.30E-1	3.42E-1	1.62E-1	-9.30E+1	1.88E+2
PENRE	MJ	4.17E+3	6.24E+0	1.82E+1	4.20E+3	9.61E+0	6.74E+0	4.32E+0	-1.27E+3	2.95E+3
PENRM	MJ	0	5.45E+1	0	5.45E+1	0	0	0	0	5.45E+1
PENRT	MJ	4.17E+3	6.07E+1	1.82E+1	4.25E+3	9.61E+0	6.74E+0	4.32E+0	-1.27E+3	3.00E+3
PET	MJ	4.33E+3	6.14E+1	1.40E+2	4.53E+3	9.74E+0	7.08E+0	4.49E+0	-1.36E+3	3.19E+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	1.45E+0	6.55E-3	1.31E-2	1.47E+0	1.02E-3	2.09E-2	5.04E-3	-8.61E-2	1.41E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.98E-4	1.35E-4	1.80E-5	7.51E-4	2.32E-5	3.28E-5	4.90E-6	-1.40E-3	-5.92E-4
NHWD	kg	4.79E+0	3.27E+0	2.97E-1	8.36E+0	5.61E-1	6.74E-1	1.79E+1	-7.40E-1	2.68E+1
RWD	kg	2.37E-3	3.78E-4	2.64E-5	2.78E-3	6.16E-5	2.37E-5	2.67E-5	-5.07E-4	2.38E-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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