

Environmental Profile

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

Ecochain v3.5.80



Product: 3069741 - PERT/EVOH Pipe IV 17x2.0 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	1.07E+2	3.82E+0	1.38E+1	1.25E+2	6.15E-1	1.23E+2	2.70E+0	-7.13E+1	1.79E+2
GWP-f	kg CO2 eq	1.17E+2	3.81E+0	1.25E+1	1.33E+2	6.14E-1	1.12E+2	2.70E+0	-7.13E+1	1.77E+2
GWP-b	kg CO2 eq	-9.85E+0	1.49E-3	1.22E+0	-8.63E+0	3.73E-4	1.04E+1	2.05E-3	7.69E-2	1.86E+0
GWP-luluc	kg CO2 eq	5.65E-2	1.50E-3	1.15E-2	6.95E-2	2.17E-4	2.75E-4	3.94E-5	-7.78E-3	6.22E-2
ODP	kg CFC11 eq	3.30E-6	8.34E-7	7.13E-7	4.85E-6	1.42E-7	1.17E-7	5.81E-8	-7.47E-6	-2.30E-6
AP	mol H+ eq	4.31E-1	3.22E-2	1.13E-1	5.76E-1	3.50E-3	1.36E-2	1.39E-3	-5.95E-2	5.35E-1
EP-fw	kg P eq	2.11E-3	3.62E-5	6.40E-4	2.78E-3	5.05E-6	1.39E-5	1.81E-6	-1.57E-4	2.65E-3
EP-m	kg N eq	7.51E-2	1.01E-2	1.27E-2	9.79E-2	1.25E-3	6.10E-3	1.04E-3	-1.90E-2	8.73E-2
EP-T	mol N eq	8.45E-1	1.11E-1	1.47E-1	1.10E+0	1.38E-2	6.93E-2	5.63E-3	-2.11E-1	9.81E-1
POCP	kg NMVOC eq	3.98E-1	3.08E-2	4.95E-2	4.79E-1	3.94E-3	1.85E-2	2.20E-3	-7.00E-2	4.33E-1
ADP-mm	kg Sb eq	1.35E-3	8.97E-5	1.48E-3	2.91E-3	1.59E-5	6.20E-6	1.39E-6	-4.22E-5	2.89E-3
ADP-f	MJ	4.04E+3	5.66E+1	1.12E+2	4.21E+3	9.43E+0	6.43E+0	4.24E+0	-1.19E+3	3.03E+3
WDP	m3 depriv.	9.20E+1	1.92E-1	4.12E+0	9.64E+1	2.89E-2	2.26E-1	2.03E-2	-2.94E+0	9.37E+1
PM	disease inc.	3.72E-6	3.20E-7	7.29E-7	4.77E-6	5.54E-8	1.09E-7	2.91E-8	-3.57E-7	4.61E-6
IR	kBq U-235 eq	2.75E+0	2.38E-1	9.59E-2	3.09E+0	4.12E-2	2.08E-2	1.98E-2	-3.86E-1	2.78E+0
ETP-fw	CTUe	7.69E+2	4.93E+1	9.23E+2	1.74E+3	7.66E+0	3.54E+1	3.92E+0	-1.37E+2	1.65E+3
HTP-c	CTUh	3.75E-8	1.70E-9	4.72E-8	8.64E-8	2.72E-10	1.44E-8	1.04E-10	-8.48E-9	9.27E-8
HTP-nc	CTUh	7.80E-7	5.30E-8	1.19E-6	2.02E-6	9.13E-9	1.11E-7	2.42E-9	-9.67E-8	2.05E-6
SQP	Pt	1.03E+3	4.56E+1	1.72E+2	1.24E+3	8.07E+0	2.89E+0	1.09E+1	-7.75E+2	4.90E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.95E+2	3.11E-2	1.80E+3	1.99E+3	1.35E-1	3.54E-1	1.68E-1	-1.15E+2	1.88E+3
PERM	MJ	0	6.49E-1	0	6.49E-1	0	0	0	0	6.49E-1
PERT	MJ	1.95E+2	6.80E-1	1.80E+3	1.99E+3	1.35E-1	3.54E-1	1.68E-1	-1.15E+2	1.88E+3
PENRE	MJ	4.33E+3	5.09E+0	1.19E+2	4.46E+3	1.00E+1	6.89E+0	4.50E+0	-1.32E+3	3.16E+3
PENRM	MJ	0	5.50E+1	0	5.50E+1	0	0	0	0	5.50E+1
PENRT	MJ	4.33E+3	6.01E+1	1.19E+2	4.51E+3	1.00E+1	6.89E+0	4.50E+0	-1.32E+3	3.21E+3
PET	MJ	4.53E+3	6.08E+1	1.92E+3	6.50E+3	1.01E+1	7.24E+0	4.67E+0	-1.43E+3	5.09E+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	1.47E+0	6.55E-3	1.15E-1	1.60E+0	1.07E-3	2.17E-2	5.24E-3	-8.06E-2	1.54E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.27E-4	1.36E-4	1.90E-5	7.82E-4	2.41E-5	3.38E-5	5.10E-6	-1.47E-3	-6.23E-4
NHWD	kg	4.91E+0	3.30E+0	3.86E-1	8.60E+0	5.84E-1	6.85E-1	1.87E+1	-8.48E-1	2.77E+1
RWD	kg	2.50E-3	3.74E-4	2.78E-5	2.90E-3	6.41E-5	2.40E-5	2.78E-5	-5.27E-4	2.49E-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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