

Environmental Profile

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

Ecochain v3.5.80



Product: 3059363 - PERT/EVOH Pipe IV 20x2.0 L=200
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	4.48E+1	1.53E+0	1.52E+0	4.78E+1	2.45E-1	4.80E+1	1.08E+0	-2.76E+1	6.96E+1
GWP-f	kg CO2 eq	4.73E+1	1.53E+0	9.80E-1	4.98E+1	2.45E-1	4.46E+1	1.08E+0	-2.89E+1	6.68E+1
GWP-b	kg CO2 eq	-2.54E+0	6.01E-4	5.42E-1	-2.00E+0	1.49E-4	3.37E+0	8.17E-4	1.34E+0	2.71E+0
GWP-luluc	kg CO2 eq	2.80E-2	6.03E-4	4.67E-4	2.90E-2	8.68E-5	1.39E-4	1.56E-5	-1.16E-2	1.77E-2
ODP	kg CFC11 eq	1.43E-6	3.35E-7	5.72E-8	1.82E-6	5.65E-8	6.25E-8	2.32E-8	-3.05E-6	-1.09E-6
AP	mol H+ eq	1.76E-1	1.28E-2	4.32E-3	1.93E-1	1.40E-3	5.95E-3	5.54E-4	-2.86E-2	1.72E-1
EP-fw	kg P eq	8.99E-4	1.45E-5	2.82E-5	9.42E-4	2.02E-6	6.72E-6	7.20E-7	-1.67E-4	7.85E-4
EP-m	kg N eq	3.15E-2	4.02E-3	8.00E-4	3.64E-2	5.00E-4	2.63E-3	4.14E-4	-8.67E-3	3.12E-2
EP-T	mol N eq	3.51E-1	4.44E-2	7.60E-3	4.03E-1	5.51E-3	2.98E-2	2.25E-3	-9.66E-2	3.44E-1
POCP	kg NMVOC eq	1.60E-1	1.23E-2	2.46E-3	1.75E-1	1.57E-3	8.03E-3	8.79E-4	-3.05E-2	1.55E-1
ADP-mm	kg Sb eq	5.48E-4	3.61E-5	4.63E-5	6.31E-4	6.34E-6	4.94E-6	5.56E-7	-2.23E-5	6.20E-4
ADP-f	MJ	1.62E+3	2.27E+1	7.34E+0	1.65E+3	3.76E+0	3.59E+0	1.69E+0	-4.83E+2	1.17E+3
WDP	m3 depriv.	3.69E+1	7.72E-2	2.06E-1	3.72E+1	1.16E-2	9.90E-2	7.83E-3	-2.99E+0	3.43E+1
PM	disease inc.	1.54E-6	1.29E-7	4.05E-8	1.71E-6	2.21E-8	5.21E-8	1.16E-8	-2.41E-7	1.55E-6
IR	kBq U-235 eq	1.14E+0	9.55E-2	1.03E-2	1.24E+0	1.65E-2	1.28E-2	7.90E-3	-2.26E-1	1.05E+0
ETP-fw	CTUe	4.58E+2	1.98E+1	3.45E+1	5.12E+2	3.06E+0	1.62E+1	1.56E+0	-1.48E+2	3.85E+2
HTP-c	CTUh	1.47E-8	6.83E-10	1.81E-9	1.72E-8	1.09E-10	5.73E-9	4.13E-11	-3.65E-9	1.94E-8
HTP-nc	CTUh	3.22E-7	2.13E-8	4.32E-8	3.86E-7	3.64E-9	4.54E-8	9.66E-10	-6.03E-8	3.76E-7
SQP	Pt	3.47E+2	1.83E+1	6.72E+0	3.72E+2	3.22E+0	1.69E+0	4.34E+0	-4.49E+2	-6.78E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.18E+1	1.22E-2	5.31E+1	1.25E+2	5.40E-2	1.71E-1	6.74E-2	-7.41E+1	5.11E+1
PERM	MJ	0	2.61E-1	0	2.61E-1	0	0	0	0	2.61E-1
PERT	MJ	7.18E+1	2.73E-1	5.31E+1	1.25E+2	5.40E-2	1.71E-1	6.74E-2	-7.41E+1	5.13E+1
PENRE	MJ	1.74E+3	2.00E+0	7.90E+0	1.75E+3	4.00E+0	3.83E+0	1.80E+0	-5.35E+2	1.22E+3
PENRM	MJ	0	2.21E+1	0	2.21E+1	0	0	0	0	2.21E+1
PENRT	MJ	1.74E+3	2.41E+1	7.90E+0	1.77E+3	4.00E+0	3.83E+0	1.80E+0	-5.35E+2	1.24E+3
PET	MJ	1.81E+3	2.44E+1	6.10E+1	1.89E+3	4.05E+0	4.00E+0	1.86E+0	-6.09E+2	1.29E+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	5.96E-1	2.63E-3	5.68E-3	6.04E-1	4.26E-4	9.01E-3	2.09E-3	-7.95E-2	5.37E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.64E-4	5.46E-5	7.76E-6	3.26E-4	9.63E-6	1.61E-5	2.03E-6	-5.93E-4	-2.40E-4
NHWD	kg	2.09E+0	1.33E+0	1.28E-1	3.55E+0	2.33E-1	3.03E-1	7.46E+0	-3.88E-1	1.12E+1
RWD	kg	1.04E-3	1.50E-4	1.13E-5	1.20E-3	2.56E-5	1.62E-5	1.11E-5	-2.76E-4	9.74E-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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