

Environmental Profile

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

Ecochain v3.5.80



Product: 3061406 - PERT/EVOH Pipe IV 20x2.0 L=120 Soft
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	2.03E+1	1.03E+0	1.36E+0	2.27E+1	1.45E-1	3.70E+1	6.37E-1	-1.73E+1	4.32E+1
GWP-f	kg CO2 eq	3.00E+1	1.03E+0	9.47E-1	3.19E+1	1.45E-1	2.67E+1	6.37E-1	-1.85E+1	4.09E+1
GWP-b	kg CO2 eq	-9.64E+0	4.13E-4	4.08E-1	-9.23E+0	8.79E-5	1.03E+1	4.82E-4	1.21E+0	2.29E+0
GWP-luluc	kg CO2 eq	2.35E-2	4.04E-4	5.63E-4	2.45E-2	5.12E-5	1.16E-4	9.24E-6	-1.36E-2	1.10E-2
ODP	kg CFC11 eq	1.06E-6	2.26E-7	5.49E-8	1.34E-6	3.34E-8	5.25E-8	1.37E-8	-1.97E-6	-5.38E-7
AP	mol H+ eq	1.16E-1	8.36E-3	5.34E-3	1.29E-1	8.25E-4	4.10E-3	3.27E-4	-2.62E-2	1.08E-1
EP-fw	kg P eq	6.29E-4	9.88E-6	3.29E-5	6.72E-4	1.19E-6	5.18E-6	4.25E-7	-1.86E-4	4.92E-4
EP-m	kg N eq	2.19E-2	2.64E-3	8.23E-4	2.53E-2	2.95E-4	1.78E-3	2.45E-4	-7.57E-3	2.01E-2
EP-T	mol N eq	2.43E-1	2.92E-2	8.35E-3	2.80E-1	3.25E-3	2.01E-2	1.33E-3	-8.58E-2	2.19E-1
POCP	kg NMVOC eq	1.07E-1	8.13E-3	2.74E-3	1.18E-1	9.29E-4	5.45E-3	5.19E-4	-2.78E-2	9.72E-2
ADP-mm	kg Sb eq	3.73E-4	2.46E-5	6.26E-5	4.60E-4	3.74E-6	4.83E-6	3.28E-7	-3.46E-5	4.35E-4
ADP-f	MJ	9.93E+2	1.54E+1	7.46E+0	1.02E+3	2.22E+0	3.21E+0	1.00E+0	-3.10E+2	7.12E+2
WDP	m3 depriv.	2.26E+1	5.25E-2	2.29E-1	2.28E+1	6.82E-3	6.62E-2	4.62E-3	-2.68E+0	2.02E+1
PM	disease inc.	1.13E-6	8.75E-8	4.34E-8	1.26E-6	1.31E-8	3.85E-8	6.87E-9	-3.28E-7	9.90E-7
IR	kBq U-235 eq	7.62E-1	6.45E-2	9.26E-3	8.36E-1	9.71E-3	1.26E-2	4.66E-3	-2.12E-1	6.51E-1
ETP-fw	CTUe	3.60E+2	1.34E+1	4.30E+1	4.16E+2	1.80E+0	1.10E+1	9.23E-1	-1.51E+2	2.79E+2
HTP-c	CTUh	1.26E-8	4.60E-10	2.23E-9	1.53E-8	6.42E-11	3.60E-9	2.44E-11	-5.33E-9	1.37E-8
HTP-nc	CTUh	2.27E-7	1.45E-8	5.46E-8	2.96E-7	2.15E-9	2.87E-8	5.70E-10	-6.86E-8	2.59E-7
SQP	Pt	9.04E+2	1.25E+1	8.23E+0	9.24E+2	1.90E+0	1.76E+0	2.56E+0	-9.11E+2	1.93E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.45E+2	7.30E-3	7.38E+1	2.19E+2	3.19E-2	1.35E-1	3.98E-2	-1.43E+2	7.59E+1
PERM	MJ	0	1.78E-1	0	1.78E-1	0	0	0	0	1.78E-1
PERT	MJ	1.45E+2	1.86E-1	7.38E+1	2.19E+2	3.19E-2	1.35E-1	3.98E-2	-1.43E+2	7.61E+1
PENRE	MJ	1.07E+3	1.20E+0	8.01E+0	1.07E+3	2.36E+0	3.42E+0	1.06E+0	-3.43E+2	7.39E+2
PENRM	MJ	0	1.51E+1	0	1.51E+1	0	0	0	0	1.51E+1
PENRT	MJ	1.07E+3	1.63E+1	8.01E+0	1.09E+3	2.36E+0	3.42E+0	1.06E+0	-3.43E+2	7.54E+2
PET	MJ	1.21E+3	1.65E+1	8.19E+1	1.31E+3	2.39E+0	3.56E+0	1.10E+0	-4.85E+2	8.30E+2
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	3.75E-1	1.79E-3	6.35E-3	3.83E-1	2.51E-4	5.84E-3	1.24E-3	-7.21E-2	3.18E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.22E-4	3.71E-5	5.88E-6	2.65E-4	5.68E-6	1.23E-5	1.20E-6	-4.03E-4	-1.19E-4
NHWD	kg	1.75E+0	9.06E-1	9.81E-2	2.75E+0	1.38E-1	2.47E-1	4.40E+0	-5.80E-1	6.96E+0
RWD	kg	7.13E-4	1.01E-4	8.59E-6	8.23E-4	1.51E-5	1.66E-5	6.54E-6	-2.51E-4	6.11E-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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