

Environmental Profile

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

Ecochain v3.5.80



Product: 3075472 - PERT/EVOH/PERT Pipe IV 18x2.0 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	1.22E+2	4.40E+0	4.80E+0	1.31E+2	6.74E-1	1.31E+2	2.96E+0	-7.73E+1	1.88E+2
GWP-f	kg CO2 eq	1.29E+2	4.40E+0	3.38E+0	1.37E+2	6.74E-1	1.23E+2	2.96E+0	-7.78E+1	1.85E+2
GWP-b	kg CO2 eq	-6.86E+0	1.65E-3	1.42E+0	-5.44E+0	4.09E-4	7.63E+0	2.24E-3	4.85E-1	2.68E+0
GWP-luluc	kg CO2 eq	6.13E-2	1.77E-3	2.05E-3	6.51E-2	2.38E-4	3.01E-4	4.34E-5	-9.44E-3	5.62E-2
ODP	kg CFC11 eq	3.65E-6	9.61E-7	1.96E-7	4.81E-6	1.55E-7	1.29E-7	6.38E-8	-8.14E-6	-2.98E-6
AP	mol H+ eq	4.76E-1	3.96E-2	1.94E-2	5.35E-1	3.84E-3	1.49E-2	1.53E-3	-6.36E-2	4.92E-1
EP-fw	kg P eq	2.35E-3	4.12E-5	1.19E-4	2.51E-3	5.54E-6	1.52E-5	1.99E-6	-1.82E-4	2.35E-3
EP-m	kg N eq	8.30E-2	1.22E-2	2.95E-3	9.81E-2	1.37E-3	6.69E-3	1.13E-3	-2.03E-2	8.69E-2
EP-T	mol N eq	9.32E-1	1.34E-1	3.01E-2	1.10E+0	1.51E-2	7.60E-2	6.18E-3	-2.25E-1	9.69E-1
POCP	kg NMVOC eq	4.37E-1	3.71E-2	9.91E-3	4.84E-1	4.33E-3	2.03E-2	2.42E-3	-7.39E-2	4.37E-1
ADP-mm	kg Sb eq	1.48E-3	1.02E-4	2.29E-4	1.81E-3	1.74E-5	7.17E-6	1.53E-6	-3.99E-5	1.79E-3
ADP-f	MJ	4.43E+3	6.51E+1	2.68E+1	4.52E+3	1.03E+1	7.12E+0	4.66E+0	-1.30E+3	3.24E+3
WDP	m3 depriv.	1.01E+2	2.18E-1	8.27E-1	1.03E+2	3.17E-2	2.45E-1	2.31E-2	-3.66E+0	9.92E+1
PM	disease inc.	4.07E-6	3.64E-7	1.56E-7	4.59E-6	6.08E-8	1.21E-7	3.20E-8	-3.58E-7	4.45E-6
IR	kBq U-235 eq	2.98E+0	2.74E-1	3.28E-2	3.28E+0	4.52E-2	2.29E-2	2.17E-2	-4.22E-1	2.95E+0
ETP-fw	CTUe	9.13E+2	5.64E+1	1.57E+2	1.13E+3	8.40E+0	3.89E+1	4.29E+0	-1.65E+2	1.01E+3
HTP-c	CTUh	4.09E-8	1.98E-9	8.13E-9	5.10E-8	2.99E-10	1.63E-8	1.15E-10	-8.10E-9	5.96E-8
HTP-nc	CTUh	8.60E-7	6.04E-8	1.99E-7	1.12E-6	1.00E-8	1.23E-7	2.66E-9	-1.02E-7	1.15E-6
SQP	Pt	8.12E+2	5.16E+1	2.99E+1	8.93E+2	8.85E+0	3.15E+0	1.19E+1	-6.44E+2	2.74E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.68E+2	4.39E-2	2.71E+2	4.40E+2	1.48E-1	3.87E-1	1.84E-1	-9.70E+1	3.43E+2
PERM	MJ	0	7.32E-1	0	7.32E-1	0	0	0	0	7.32E-1
PERT	MJ	1.68E+2	7.75E-1	2.71E+2	4.40E+2	1.48E-1	3.87E-1	1.84E-1	-9.70E+1	3.44E+2
PENRE	MJ	4.75E+3	7.13E+0	2.87E+1	4.79E+3	1.10E+1	7.62E+0	4.94E+0	-1.44E+3	3.37E+3
PENRM	MJ	0	6.20E+1	0	6.20E+1	0	0	0	0	6.20E+1
PENRT	MJ	4.75E+3	6.92E+1	2.87E+1	4.85E+3	1.10E+1	7.62E+0	4.94E+0	-1.44E+3	3.43E+3
PET	MJ	4.92E+3	6.99E+1	3.00E+2	5.29E+3	1.11E+1	8.01E+0	5.13E+0	-1.54E+3	3.78E+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	1.66E+0	7.45E-3	2.29E-2	1.69E+0	1.17E-3	2.37E-2	5.75E-3	-9.88E-2	1.62E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.77E-4	1.54E-4	2.04E-5	8.51E-4	2.64E-5	3.77E-5	5.61E-6	-1.59E-3	-6.70E-4
NHWD	kg	5.42E+0	3.72E+0	3.42E-1	9.49E+0	6.41E-1	7.60E-1	2.05E+1	-8.06E-1	3.06E+1
RWD	kg	2.69E-3	4.30E-4	2.99E-5	3.15E-3	7.03E-5	2.66E-5	3.04E-5	-5.71E-4	2.71E-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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