

Environmental Profile

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

Ecochain v3.5.80



Product: 4066379 - PERT/EVOH/PERT Pipe IV 16x2.0 L=240 Pro5
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	3.75E+1	1.63E+0	2.75E+0	4.19E+1	2.36E-1	5.34E+1	1.04E+0	-2.75E+1	6.91E+1
GWP-f	kg CO2 eq	4.70E+1	1.63E+0	2.17E+0	5.08E+1	2.36E-1	4.31E+1	1.04E+0	-2.87E+1	6.65E+1
GWP-b	kg CO2 eq	-9.59E+0	6.17E-4	5.80E-1	-9.01E+0	1.43E-4	1.03E+1	7.85E-4	1.26E+0	2.59E+0
GWP-luluc	kg CO2 eq	8.06E-2	6.51E-4	1.64E-3	8.29E-2	8.35E-5	1.51E-4	1.51E-5	-1.43E-2	6.88E-2
ODP	kg CFC11 eq	1.53E-6	3.56E-7	1.25E-7	2.01E-6	5.43E-8	6.79E-8	2.23E-8	-3.04E-6	-8.87E-7
AP	mol H+ eq	1.79E-1	1.44E-2	1.58E-2	2.09E-1	1.34E-3	6.02E-3	5.33E-4	-3.37E-2	1.83E-1
EP-fw	kg P eq	9.42E-4	1.53E-5	9.28E-5	1.05E-3	1.94E-6	7.06E-6	6.96E-7	-2.03E-4	8.56E-4
EP-m	kg N eq	3.28E-2	4.43E-3	2.04E-3	3.93E-2	4.81E-4	2.65E-3	3.97E-4	-1.00E-2	3.28E-2
EP-T	mol N eq	3.65E-1	4.90E-2	2.23E-2	4.36E-1	5.30E-3	2.99E-2	2.16E-3	-1.13E-1	3.61E-1
POCP	kg NMVOC eq	1.64E-1	1.36E-2	7.42E-3	1.85E-1	1.51E-3	8.07E-3	8.46E-4	-3.65E-2	1.59E-1
ADP-mm	kg Sb eq	5.68E-4	3.79E-5	1.99E-4	8.04E-4	6.10E-6	5.58E-6	5.36E-7	-3.75E-5	7.79E-4
ADP-f	MJ	1.58E+3	2.41E+1	1.82E+1	1.62E+3	3.62E+0	4.03E+0	1.63E+0	-4.81E+2	1.15E+3
WDP	m3 depriv.	3.61E+1	8.12E-2	6.18E-1	3.68E+1	1.11E-2	9.74E-2	7.85E-3	-3.10E+0	3.38E+1
PM	disease inc.	1.65E-6	1.35E-7	1.13E-7	1.90E-6	2.13E-8	5.38E-8	1.12E-8	-3.57E-7	1.63E-6
IR	kBq U-235 eq	1.14E+0	1.01E-1	1.90E-2	1.26E+0	1.58E-2	1.50E-2	7.60E-3	-2.61E-1	1.04E+0
ETP-fw	CTUe	4.81E+2	2.09E+1	1.29E+2	6.30E+2	2.94E+0	1.60E+1	1.50E+0	-1.68E+2	4.83E+2
HTP-c	CTUh	1.78E-8	7.31E-10	6.62E-9	2.51E-8	1.05E-10	5.82E-9	4.00E-11	-6.05E-9	2.51E-8
HTP-nc	CTUh	3.40E-7	2.24E-8	1.65E-7	5.28E-7	3.50E-9	4.51E-8	9.30E-10	-7.89E-8	4.98E-7
SQP	Pt	9.31E+2	1.92E+1	2.42E+1	9.74E+2	3.10E+0	2.08E+0	4.18E+0	-9.25E+2	5.85E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.55E+2	1.54E-2	2.39E+2	3.94E+2	5.19E-2	1.82E-1	6.46E-2	-1.45E+2	2.50E+2
PERM	MJ	0	2.73E-1	0	2.73E-1	0	0	0	0	2.73E-1
PERT	MJ	1.55E+2	2.88E-1	2.39E+2	3.95E+2	5.19E-2	1.82E-1	6.46E-2	-1.45E+2	2.50E+2
PENRE	MJ	1.70E+3	2.50E+0	1.95E+1	1.72E+3	3.84E+0	4.30E+0	1.73E+0	-5.31E+2	1.20E+3
PENRM	MJ	0	2.31E+1	0	2.31E+1	0	0	0	0	2.31E+1
PENRT	MJ	1.70E+3	2.56E+1	1.95E+1	1.74E+3	3.84E+0	4.30E+0	1.73E+0	-5.31E+2	1.22E+3
PET	MJ	1.85E+3	2.59E+1	2.59E+2	2.14E+3	3.90E+0	4.48E+0	1.79E+0	-6.76E+2	1.47E+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	6.00E-1	2.77E-3	1.72E-2	6.20E-1	4.10E-4	8.93E-3	2.01E-3	-8.35E-2	5.48E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.06E-4	5.73E-5	8.47E-6	3.72E-4	9.26E-6	1.71E-5	1.96E-6	-6.09E-4	-2.09E-4
NHWD	kg	2.43E+0	1.39E+0	1.47E-1	3.97E+0	2.24E-1	3.33E-1	7.18E+0	-6.47E-1	1.11E+1
RWD	kg	1.06E-3	1.59E-4	1.24E-5	1.23E-3	2.46E-5	1.93E-5	1.07E-5	-3.18E-4	9.65E-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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