

Environmental Profile

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

Ecochain v3.5.80



Product: 3041369 - PERT/EVOH/PERT Pipe BK 10x1.3 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	1.48E+1	5.41E-1	7.89E-1	1.61E+1	8.13E-2	1.68E+1	3.55E-1	-9.63E+0	2.37E+1
GWP-f	kg CO2 eq	1.62E+1	5.41E-1	6.10E-1	1.74E+1	8.13E-2	1.53E+1	3.55E-1	-9.64E+0	2.35E+1
GWP-b	kg CO2 eq	-1.44E+0	1.98E-4	1.79E-1	-1.26E+0	4.93E-5	1.49E+0	2.69E-4	1.29E-2	2.45E-1
GWP-luluc	kg CO2 eq	1.08E-2	2.19E-4	4.44E-4	1.15E-2	2.88E-5	4.27E-5	5.36E-6	-1.12E-3	1.04E-2
ODP	kg CFC11 eq	6.23E-7	1.18E-7	3.51E-8	7.76E-7	1.87E-8	1.78E-8	7.70E-9	-1.01E-6	-1.88E-7
AP	mol H+ eq	6.14E-2	5.05E-3	4.29E-3	7.08E-2	4.63E-4	1.89E-3	1.85E-4	-8.17E-3	6.51E-2
EP-fw	kg P eq	3.03E-4	5.02E-6	2.53E-5	3.34E-4	6.69E-7	2.06E-6	2.44E-7	-2.23E-5	3.14E-4
EP-m	kg N eq	1.07E-2	1.54E-3	5.67E-4	1.28E-2	1.66E-4	8.47E-4	1.38E-4	-2.60E-3	1.13E-2
EP-T	mol N eq	1.20E-1	1.70E-2	6.12E-3	1.43E-1	1.83E-3	9.60E-3	7.47E-4	-2.88E-2	1.26E-1
POCP	kg NMVOC eq	5.57E-2	4.67E-3	2.03E-3	6.24E-2	5.22E-4	2.56E-3	2.91E-4	-9.60E-3	5.62E-2
ADP-mm	kg Sb eq	1.88E-4	1.24E-5	5.34E-5	2.54E-4	2.10E-6	1.02E-6	1.87E-7	-6.03E-6	2.51E-4
ADP-f	MJ	5.53E+2	7.99E+0	5.07E+0	5.67E+2	1.25E+0	1.00E+0	5.63E-1	-1.61E+2	4.08E+2
WDP	m3 depriv.	1.25E+1	2.66E-2	1.69E-1	1.27E+1	3.83E-3	3.13E-2	3.22E-3	-4.21E-1	1.23E+1
PM	disease inc.	5.54E-7	4.43E-8	3.10E-8	6.30E-7	7.34E-9	1.55E-8	3.87E-9	-5.03E-8	6.06E-7
IR	kBq U-235 eq	4.18E-1	3.36E-2	5.43E-3	4.57E-1	5.45E-3	3.29E-3	2.61E-3	-5.33E-2	4.15E-1
ETP-fw	CTUe	1.20E+2	6.89E+0	3.48E+1	1.61E+2	1.01E+0	5.17E+0	5.25E-1	-1.90E+1	1.49E+2
HTP-c	CTUh	5.35E-9	2.44E-10	1.79E-9	7.39E-9	3.60E-11	2.29E-9	1.42E-11	-1.18E-9	8.55E-9
HTP-nc	CTUh	1.11E-7	7.37E-9	4.46E-8	1.63E-7	1.21E-9	1.61E-8	3.25E-10	-1.34E-8	1.67E-7
SQP	Pt	1.49E+2	6.27E+0	6.56E+0	1.62E+2	1.07E+0	4.93E-1	1.44E+0	-1.11E+2	5.43E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.77E+1	5.92E-3	6.40E+1	9.18E+1	1.79E-2	5.27E-2	2.21E-2	-1.64E+1	7.54E+1
PERM	MJ	0	8.87E-2	0	8.87E-2	0	0	0	0	8.87E-2
PERT	MJ	2.77E+1	9.46E-2	6.40E+1	9.18E+1	1.79E-2	5.27E-2	2.21E-2	-1.64E+1	7.55E+1
PENRE	MJ	5.94E+2	9.66E-1	5.43E+0	6.00E+2	1.32E+0	1.07E+0	5.97E-1	-1.79E+2	4.24E+2
PENRM	MJ	0	7.52E+0	0	7.52E+0	0	0	0	0	7.52E+0
PENRT	MJ	5.94E+2	8.48E+0	5.43E+0	6.08E+2	1.32E+0	1.07E+0	5.97E-1	-1.79E+2	4.32E+2
PET	MJ	6.21E+2	8.58E+0	6.95E+1	7.00E+2	1.34E+0	1.12E+0	6.19E-1	-1.95E+2	5.07E+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	2.09E-1	9.08E-4	4.71E-3	2.15E-1	1.41E-4	2.99E-3	6.93E-4	-1.13E-2	2.07E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.08E-5	1.88E-5	2.60E-6	1.12E-4	3.19E-6	5.15E-6	6.81E-7	-1.98E-4	-7.72E-5
NHWD	kg	7.32E-1	4.51E-1	4.48E-2	1.23E+0	7.73E-2	1.24E-1	2.47E+0	-1.18E-1	3.78E+0
RWD	kg	4.10E-4	5.28E-5	3.81E-6	4.66E-4	8.48E-6	3.89E-6	3.67E-6	-7.24E-5	4.10E-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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