

Environmental Profile

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

Ecochain v3.5.80



Product: 3041370 - PERT/EVOH/PERT Pipe BK 10x1.3 L=400
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	2.90E+1	1.08E+0	5.24E+0	3.53E+1	1.63E-1	3.28E+1	7.10E-1	-1.88E+1	5.02E+1
GWP-f	kg CO2 eq	3.17E+1	1.07E+0	4.92E+0	3.77E+1	1.63E-1	3.00E+1	7.10E-1	-1.89E+1	4.97E+1
GWP-b	kg CO2 eq	-2.67E+0	3.93E-4	3.11E-1	-2.36E+0	9.87E-5	2.79E+0	5.39E-4	2.41E-2	4.60E-1
GWP-luluc	kg CO2 eq	2.09E-2	4.35E-4	4.68E-3	2.60E-2	5.75E-5	8.00E-5	1.07E-5	-2.11E-3	2.41E-2
ODP	kg CFC11 eq	1.22E-6	2.34E-7	2.79E-7	1.73E-6	3.75E-8	3.37E-8	1.54E-8	-1.97E-6	-1.51E-7
AP	mol H+ eq	1.19E-1	1.01E-2	4.60E-2	1.75E-1	9.26E-4	3.68E-3	3.69E-4	-1.58E-2	1.64E-1
EP-fw	kg P eq	5.81E-4	9.97E-6	2.59E-4	8.50E-4	1.34E-6	3.93E-6	4.89E-7	-4.23E-5	8.14E-4
EP-m	kg N eq	2.07E-2	3.06E-3	5.06E-3	2.88E-2	3.31E-4	1.65E-3	2.76E-4	-5.05E-3	2.60E-2
EP-T	mol N eq	2.32E-1	3.38E-2	5.92E-2	3.25E-1	3.65E-3	1.87E-2	1.49E-3	-5.59E-2	2.93E-1
POCP	kg NMVOC eq	1.08E-1	9.31E-3	2.00E-2	1.37E-1	1.04E-3	4.97E-3	5.83E-4	-1.86E-2	1.25E-1
ADP-mm	kg Sb eq	3.67E-4	2.46E-5	6.06E-4	9.97E-4	4.20E-6	1.85E-6	3.73E-7	-1.14E-5	9.92E-4
ADP-f	MJ	1.09E+3	1.59E+1	4.45E+1	1.15E+3	2.49E+0	1.86E+0	1.13E+0	-3.15E+2	8.37E+2
WDP	m3 depriv.	2.45E+1	5.28E-2	1.66E+0	2.62E+1	7.66E-3	6.04E-2	6.43E-3	-7.99E-1	2.55E+1
PM	disease inc.	1.08E-6	8.81E-8	2.92E-7	1.46E-6	1.47E-8	2.98E-8	7.73E-9	-9.57E-8	1.41E-6
IR	kBq U-235 eq	8.13E-1	6.67E-2	3.66E-2	9.17E-1	1.09E-2	6.04E-3	5.23E-3	-1.03E-1	8.36E-1
ETP-fw	CTUe	2.29E+2	1.37E+1	3.76E+2	6.18E+2	2.03E+0	1.01E+1	1.05E+0	-3.66E+1	5.95E+2
HTP-c	CTUh	1.04E-8	4.84E-10	1.92E-8	3.01E-8	7.21E-11	4.49E-9	2.84E-11	-2.26E-9	3.24E-8
HTP-nc	CTUh	2.16E-7	1.46E-8	4.86E-7	7.16E-7	2.41E-9	3.15E-8	6.50E-10	-2.58E-8	7.25E-7
SQP	Pt	2.80E+2	1.24E+1	6.99E+1	3.62E+2	2.13E+0	8.70E-1	2.88E+0	-2.08E+2	1.60E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.23E+1	1.18E-2	7.38E+2	7.90E+2	3.58E-2	1.00E-1	4.41E-2	-3.08E+1	7.60E+2
PERM	MJ	0	1.76E-1	0	1.76E-1	0	0	0	0	1.76E-1
PERT	MJ	5.23E+1	1.88E-1	7.38E+2	7.90E+2	3.58E-2	1.00E-1	4.41E-2	-3.08E+1	7.60E+2
PENRE	MJ	1.16E+3	1.93E+0	4.74E+1	1.21E+3	2.65E+0	1.99E+0	1.19E+0	-3.49E+2	8.71E+2
PENRM	MJ	0	1.49E+1	0	1.49E+1	0	0	0	0	1.49E+1
PENRT	MJ	1.16E+3	1.69E+1	4.74E+1	1.23E+3	2.65E+0	1.99E+0	1.19E+0	-3.49E+2	8.86E+2
PET	MJ	1.22E+3	1.71E+1	7.85E+2	2.02E+3	2.68E+0	2.09E+0	1.24E+0	-3.80E+2	1.65E+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	4.05E-1	1.80E-3	4.64E-2	4.53E-1	2.82E-4	5.83E-3	1.39E-3	-2.17E-2	4.39E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.76E-4	3.73E-5	5.11E-6	2.19E-4	6.38E-6	9.88E-6	1.36E-6	-3.88E-4	-1.52E-4
NHWD	kg	1.39E+0	8.96E-1	1.15E-1	2.40E+0	1.55E-1	2.14E-1	4.94E+0	-2.26E-1	7.49E+0
RWD	kg	8.01E-4	1.05E-4	7.46E-6	9.13E-4	1.70E-5	7.04E-6	7.35E-6	-1.40E-4	8.04E-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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