

Environmental Profile

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

Ecochain v3.5.80



Product: 3087903 - PERT/EVOH/PERT Pipe GN 17x2.0 L=560
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	1.06E+2	3.73E+0	4.07E+0	1.14E+2	5.74E-1	1.11E+2	2.52E+0	-6.34E+1	1.65E+2
GWP-f	kg CO2 eq	1.11E+2	3.72E+0	2.80E+0	1.18E+2	5.73E-1	1.04E+2	2.52E+0	-6.70E+1	1.58E+2
GWP-b	kg CO2 eq	-5.01E+0	1.41E-3	1.26E+0	-3.75E+0	3.48E-4	7.18E+0	1.90E-3	3.69E+0	7.12E+0
GWP-luluc	kg CO2 eq	7.07E-2	1.49E-3	1.61E-3	7.38E-2	2.03E-4	3.35E-4	3.73E-5	-3.05E-2	4.39E-2
ODP	kg CFC11 eq	3.52E-6	8.14E-7	1.62E-7	4.50E-6	1.32E-7	1.53E-7	5.43E-8	-7.07E-6	-2.23E-6
AP	mol H+ eq	4.19E-1	3.29E-2	1.52E-2	4.67E-1	3.27E-3	1.41E-2	1.30E-3	-6.81E-2	4.17E-1
EP-fw	kg P eq	2.17E-3	3.50E-5	9.44E-5	2.30E-3	4.72E-6	1.62E-5	1.71E-6	-4.32E-4	1.89E-3
EP-m	kg N eq	7.52E-2	1.02E-2	2.41E-3	8.78E-2	1.17E-3	6.21E-3	9.62E-4	-2.05E-2	7.57E-2
EP-T	mol N eq	8.38E-1	1.12E-1	2.42E-2	9.75E-1	1.29E-2	7.02E-2	5.27E-3	-2.28E-1	8.35E-1
POCP	kg NMVOC eq	3.77E-1	3.10E-2	7.93E-3	4.16E-1	3.68E-3	1.89E-2	2.06E-3	-7.14E-2	3.70E-1
ADP-mm	kg Sb eq	1.39E-3	8.67E-5	1.76E-4	1.65E-3	1.48E-5	1.26E-5	1.31E-6	-5.36E-5	1.63E-3
ADP-f	MJ	3.76E+3	5.52E+1	2.19E+1	3.84E+3	8.80E+0	8.84E+0	3.97E+0	-1.12E+3	2.74E+3
WDP	m3 depriv.	8.67E+1	1.86E-1	6.62E-1	8.75E+1	2.70E-2	2.27E-1	2.10E-2	-7.72E+0	8.01E+1
PM	disease inc.	3.68E-6	3.09E-7	1.26E-7	4.12E-6	5.18E-8	1.25E-7	2.72E-8	-5.97E-7	3.72E-6
IR	kBq U-235 eq	2.66E+0	2.32E-1	2.77E-2	2.91E+0	3.85E-2	3.19E-2	1.85E-2	-5.52E-1	2.45E+0
ETP-fw	CTUe	1.18E+3	4.79E+1	1.22E+2	1.35E+3	7.15E+0	3.88E+1	3.65E+0	-3.84E+2	1.02E+3
HTP-c	CTUh	3.62E-8	1.67E-9	6.36E-9	4.43E-8	2.54E-10	1.49E-8	9.87E-11	-8.47E-9	5.11E-8
HTP-nc	CTUh	7.78E-7	5.13E-8	1.55E-7	9.85E-7	8.52E-9	1.11E-7	2.27E-9	-1.48E-7	9.58E-7
SQP	Pt	7.59E+2	4.39E+1	2.35E+1	8.26E+2	7.53E+0	4.20E+0	1.02E+1	-1.08E+3	-2.35E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.61E+2	3.52E-2	2.07E+2	3.68E+2	1.26E-1	4.12E-1	1.56E-1	-1.81E+2	1.88E+2
PERM	MJ	0	6.24E-1	0	6.24E-1	0	0	0	0	6.24E-1
PERT	MJ	1.61E+2	6.59E-1	2.07E+2	3.69E+2	1.26E-1	4.12E-1	1.56E-1	-1.81E+2	1.88E+2
PENRE	MJ	4.04E+3	5.72E+0	2.35E+1	4.07E+3	9.34E+0	9.44E+0	4.21E+0	-1.24E+3	2.85E+3
PENRM	MJ	0	5.29E+1	0	5.29E+1	0	0	0	0	5.29E+1
PENRT	MJ	4.04E+3	5.86E+1	2.35E+1	4.12E+3	9.34E+0	9.44E+0	4.21E+0	-1.24E+3	2.90E+3
PET	MJ	4.20E+3	5.93E+1	2.31E+2	4.49E+3	9.47E+0	9.86E+0	4.36E+0	-1.42E+3	3.09E+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	1.43E+0	6.34E-3	1.83E-2	1.46E+0	9.96E-4	2.10E-2	4.89E-3	-2.05E-1	1.28E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.41E-4	1.31E-4	1.82E-5	7.90E-4	2.25E-5	4.03E-5	4.78E-6	-1.37E-3	-5.16E-4
NHWD	kg	5.16E+0	3.17E+0	3.03E-1	8.63E+0	5.46E-1	7.38E-1	1.74E+1	-9.09E-1	2.65E+1
RWD	kg	2.43E-3	3.65E-4	2.66E-5	2.82E-3	5.99E-5	4.05E-5	2.59E-5	-6.67E-4	2.28E-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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