

Environmental Profile

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

Ecochain v3.5.80



Product: 3087902 - PERT/EVOH/PERT Pipe GN 17x2.0 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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	3.79E+1	1.32E+0	2.81E+0	4.21E+1	2.05E-1	3.93E+1	8.99E-1	-2.27E+1	5.98E+1
GWP-f	kg CO2 eq	3.94E+1	1.32E+0	2.38E+0	4.31E+1	2.05E-1	3.71E+1	8.99E-1	-2.38E+1	5.76E+1
GWP-b	kg CO2 eq	-1.52E+0	5.01E-4	4.29E-1	-1.09E+0	1.24E-4	2.17E+0	6.80E-4	1.05E+0	2.13E+0
GWP-luluc	kg CO2 eq	2.36E-2	5.29E-4	1.99E-3	2.61E-2	7.25E-5	1.12E-4	1.33E-5	-8.86E-3	1.74E-2
ODP	kg CFC11 eq	1.22E-6	2.89E-7	1.36E-7	1.65E-6	4.72E-8	5.04E-8	1.94E-8	-2.50E-6	-7.37E-7
AP	mol H+ eq	1.48E-1	1.17E-2	1.94E-2	1.79E-1	1.17E-3	4.88E-3	4.64E-4	-2.28E-2	1.63E-1
EP-fw	kg P eq	7.56E-4	1.24E-5	1.12E-4	8.80E-4	1.69E-6	5.46E-6	6.10E-7	-1.29E-4	7.59E-4
EP-m	kg N eq	2.63E-2	3.61E-3	2.33E-3	3.23E-2	4.17E-4	2.16E-3	3.44E-4	-6.94E-3	2.82E-2
EP-T	mol N eq	2.94E-1	3.99E-2	2.62E-2	3.60E-1	4.60E-3	2.45E-2	1.88E-3	-7.72E-2	3.14E-1
POCP	kg NMVOC eq	1.33E-1	1.10E-2	8.78E-3	1.53E-1	1.31E-3	6.59E-3	7.35E-4	-2.44E-2	1.38E-1
ADP-mm	kg Sb eq	4.91E-4	3.08E-5	2.50E-4	7.72E-4	5.30E-6	3.91E-6	4.68E-7	-1.67E-5	7.65E-4
ADP-f	MJ	1.34E+3	1.96E+1	2.06E+1	1.38E+3	3.14E+0	2.89E+0	1.42E+0	-3.96E+2	9.91E+2
WDP	m3 depriv.	3.08E+1	6.59E-2	7.31E-1	3.16E+1	9.65E-3	7.88E-2	7.48E-3	-2.36E+0	2.94E+1
PM	disease inc.	1.29E-6	1.10E-7	1.31E-7	1.53E-6	1.85E-8	4.24E-8	9.73E-9	-1.83E-7	1.42E-6
IR	kBq U-235 eq	9.34E-1	8.23E-2	1.95E-2	1.04E+0	1.37E-2	1.02E-2	6.59E-3	-1.79E-1	8.88E-1
ETP-fw	CTUe	3.86E+2	1.70E+1	1.59E+2	5.62E+2	2.55E+0	1.33E+1	1.30E+0	-1.15E+2	4.64E+2
HTP-c	CTUh	1.27E-8	5.94E-10	8.13E-9	2.14E-8	9.08E-11	5.29E-9	3.52E-11	-2.77E-9	2.40E-8
HTP-nc	CTUh	2.73E-7	1.82E-8	2.04E-7	4.95E-7	3.04E-9	3.90E-8	8.11E-10	-4.68E-8	4.92E-7
SQP	Pt	2.37E+2	1.56E+1	2.97E+1	2.82E+2	2.69E+0	1.34E+0	3.63E+0	-3.19E+2	-2.88E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.18E+1	1.26E-2	3.03E+2	3.54E+2	4.51E-2	1.39E-1	5.58E-2	-5.30E+1	3.02E+2
PERM	MJ	0	2.21E-1	0	2.21E-1	0	0	0	0	2.21E-1
PERT	MJ	5.18E+1	2.34E-1	3.03E+2	3.55E+2	4.51E-2	1.39E-1	5.58E-2	-5.30E+1	3.02E+2
PENRE	MJ	1.44E+3	2.04E+0	2.20E+1	1.46E+3	3.34E+0	3.09E+0	1.50E+0	-4.39E+2	1.03E+3
PENRM	MJ	0	1.88E+1	0	1.88E+1	0	0	0	0	1.88E+1
PENRT	MJ	1.44E+3	2.08E+1	2.20E+1	1.48E+3	3.34E+0	3.09E+0	1.50E+0	-4.39E+2	1.05E+3
PET	MJ	1.49E+3	2.10E+1	3.25E+2	1.83E+3	3.38E+0	3.23E+0	1.56E+0	-4.92E+2	1.35E+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	5.08E-1	2.25E-3	2.04E-2	5.30E-1	3.56E-4	7.40E-3	1.75E-3	-6.26E-2	4.77E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.22E-4	4.65E-5	6.37E-6	2.74E-4	8.04E-6	1.37E-5	1.71E-6	-4.86E-4	-1.88E-4
NHWD	kg	1.78E+0	1.13E+0	1.16E-1	3.02E+0	1.95E-1	2.51E-1	6.23E+0	-2.93E-1	9.40E+0
RWD	kg	8.51E-4	1.29E-4	9.31E-6	9.90E-4	2.14E-5	1.28E-5	9.25E-6	-2.20E-4	8.13E-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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