

Environmental Profile

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

Ecochain v3.5.80



Product: 3083282 - PERT/EVOH/PERT Pipe RD 16x2.0 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					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	3.54E+1	1.24E+0	1.22E+0	3.78E+1	1.91E-1	3.68E+1	8.39E-1	-2.12E+1	5.45E+1
GWP-f	kg CO2 eq	3.69E+1	1.24E+0	7.98E-1	3.89E+1	1.91E-1	3.47E+1	8.39E-1	-2.23E+1	5.24E+1
GWP-b	kg CO2 eq	-1.53E+0	4.68E-4	4.18E-1	-1.11E+0	1.16E-4	2.17E+0	6.35E-4	1.05E+0	2.11E+0
GWP-luluc	kg CO2 eq	2.28E-2	4.94E-4	4.04E-4	2.37E-2	6.76E-5	1.06E-4	1.24E-5	-8.81E-3	1.51E-2
ODP	kg CFC11 eq	1.14E-6	2.70E-7	4.65E-8	1.46E-6	4.40E-8	4.81E-8	1.81E-8	-2.34E-6	-7.73E-7
AP	mol H+ eq	1.39E-1	1.09E-2	3.77E-3	1.53E-1	1.09E-3	4.59E-3	4.33E-4	-2.18E-2	1.38E-1
EP-fw	kg P eq	7.10E-4	1.16E-5	2.42E-5	7.45E-4	1.57E-6	5.18E-6	5.68E-7	-1.27E-4	6.26E-4
EP-m	kg N eq	2.47E-2	3.38E-3	6.62E-4	2.88E-2	3.90E-4	2.03E-3	3.21E-4	-6.59E-3	2.49E-2
EP-T	mol N eq	2.76E-1	3.73E-2	6.41E-3	3.20E-1	4.29E-3	2.30E-2	1.75E-3	-7.34E-2	2.75E-1
POCP	kg NMVOC eq	1.25E-1	1.03E-2	2.08E-3	1.37E-1	1.23E-3	6.20E-3	6.86E-4	-2.31E-2	1.22E-1
ADP-mm	kg Sb eq	4.68E-4	2.88E-5	4.15E-5	5.39E-4	4.94E-6	3.80E-6	4.36E-7	-1.63E-5	5.31E-4
ADP-f	MJ	1.25E+3	1.83E+1	6.06E+0	1.27E+3	2.93E+0	2.77E+0	1.32E+0	-3.71E+2	9.10E+2
WDP	m3 depriv.	2.88E+1	6.16E-2	1.74E-1	2.91E+1	9.00E-3	7.46E-2	6.84E-3	-2.31E+0	2.69E+1
PM	disease inc.	1.21E-6	1.03E-7	3.39E-8	1.35E-6	1.73E-8	4.01E-8	9.08E-9	-1.79E-7	1.23E-6
IR	kBq U-235 eq	8.77E-1	7.70E-2	8.27E-3	9.62E-1	1.28E-2	9.83E-3	6.15E-3	-1.72E-1	8.19E-1
ETP-fw	CTUe	3.70E+2	1.59E+1	3.02E+1	4.16E+2	2.38E+0	1.26E+1	1.22E+0	-1.14E+2	3.18E+2
HTP-c	CTUh	1.17E-8	5.55E-10	1.58E-9	1.39E-8	8.48E-11	4.87E-9	3.28E-11	-2.67E-9	1.62E-8
HTP-nc	CTUh	2.57E-7	1.70E-8	3.79E-8	3.12E-7	2.84E-9	3.63E-8	7.56E-10	-4.54E-8	3.06E-7
SQP	Pt	2.34E+2	1.46E+1	5.84E+0	2.54E+2	2.51E+0	1.29E+0	3.39E+0	-3.18E+2	-5.68E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.03E+1	1.17E-2	4.80E+1	9.84E+1	4.21E-2	1.32E-1	5.21E-2	-5.30E+1	4.56E+1
PERM	MJ	0	2.07E-1	0	2.07E-1	0	0	0	0	2.07E-1
PERT	MJ	5.03E+1	2.19E-1	4.80E+1	9.86E+1	4.21E-2	1.32E-1	5.21E-2	-5.30E+1	4.58E+1
PENRE	MJ	1.34E+3	1.91E+0	6.52E+0	1.35E+3	3.11E+0	2.95E+0	1.40E+0	-4.11E+2	9.46E+2
PENRM	MJ	0	1.75E+1	0	1.75E+1	0	0	0	0	1.75E+1
PENRT	MJ	1.34E+3	1.95E+1	6.52E+0	1.37E+3	3.11E+0	2.95E+0	1.40E+0	-4.11E+2	9.64E+2
PET	MJ	1.39E+3	1.97E+1	5.45E+1	1.47E+3	3.16E+0	3.09E+0	1.45E+0	-4.64E+2	1.01E+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	4.75E-1	2.10E-3	4.81E-3	4.81E-1	3.32E-4	6.95E-3	1.63E-3	-6.12E-2	4.29E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.09E-4	4.35E-5	5.98E-6	2.59E-4	7.50E-6	1.29E-5	1.59E-6	-4.55E-4	-1.75E-4
NHWD	kg	1.68E+0	1.05E+0	9.87E-2	2.84E+0	1.82E-1	2.36E-1	5.81E+0	-2.83E-1	8.79E+0
RWD	kg	7.99E-4	1.21E-4	8.75E-6	9.29E-4	2.00E-5	1.24E-5	8.64E-6	-2.11E-4	7.59E-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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