

Environmental Profile

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

Ecochain v3.5.80



Product: 3061408 - PERT/EVOH Pipe IV 20x2.0 L=600 Soft
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	1.24E+2	4.74E+0	4.40E+0	1.33E+2	7.25E-1	1.48E+2	3.19E+0	-8.46E+1	2.00E+2
GWP-f	kg CO2 eq	1.39E+2	4.74E+0	2.80E+0	1.46E+2	7.25E-1	1.32E+2	3.19E+0	-8.47E+1	1.97E+2
GWP-b	kg CO2 eq	-1.49E+1	1.87E-3	1.60E+0	-1.33E+1	4.40E-4	1.56E+1	2.42E-3	1.21E-1	2.40E+0
GWP-luluc	kg CO2 eq	6.61E-2	1.86E-3	1.29E-3	6.93E-2	2.57E-4	3.33E-4	4.63E-5	-1.10E-2	5.89E-2
ODP	kg CFC11 eq	3.93E-6	1.04E-6	1.64E-7	5.13E-6	1.67E-7	1.42E-7	6.86E-8	-8.87E-6	-3.36E-6
AP	mol H+ eq	5.12E-1	3.94E-2	1.19E-2	5.63E-1	4.13E-3	1.62E-2	1.64E-3	-7.34E-2	5.12E-1
EP-fw	kg P eq	2.51E-3	4.51E-5	7.81E-5	2.63E-3	5.96E-6	1.67E-5	2.13E-6	-2.08E-4	2.45E-3
EP-m	kg N eq	8.95E-2	1.24E-2	2.26E-3	1.04E-1	1.48E-3	7.25E-3	1.23E-3	-2.33E-2	9.08E-2
EP-T	mol N eq	1.01E+0	1.37E-1	2.13E-2	1.16E+0	1.63E-2	8.24E-2	6.65E-3	-2.59E-1	1.01E+0
POCP	kg NMVOC eq	4.73E-1	3.79E-2	6.88E-3	5.18E-1	4.65E-3	2.20E-2	2.60E-3	-8.62E-2	4.61E-1
ADP-mm	kg Sb eq	1.60E-3	1.12E-4	1.25E-4	1.84E-3	1.88E-5	7.71E-6	1.64E-6	-5.75E-5	1.81E-3
ADP-f	MJ	4.77E+3	7.05E+1	2.08E+1	4.87E+3	1.11E+1	7.83E+0	5.01E+0	-1.41E+3	3.47E+3
WDP	m3 depriv.	1.09E+2	2.40E-1	5.75E-1	1.09E+2	3.41E-2	2.70E-1	2.32E-2	-3.63E+0	1.06E+2
PM	disease inc.	4.45E-6	4.00E-7	1.14E-7	4.97E-6	6.54E-8	1.31E-7	3.44E-8	-4.84E-7	4.71E-6
IR	kBq U-235 eq	3.28E+0	2.96E-1	2.99E-2	3.61E+0	4.86E-2	2.58E-2	2.34E-2	-4.79E-1	3.22E+0
ETP-fw	CTUe	9.20E+2	6.14E+1	9.44E+1	1.08E+3	9.04E+0	4.20E+1	4.62E+0	-1.76E+2	9.56E+2
HTP-c	CTUh	4.50E-8	2.12E-9	4.96E-9	5.20E-8	3.22E-10	1.66E-8	1.22E-10	-1.12E-8	5.79E-8
HTP-nc	CTUh	9.31E-7	6.61E-8	1.18E-7	1.11E-6	1.08E-8	1.30E-7	2.86E-9	-1.25E-7	1.13E-6
SQP	Pt	1.49E+3	5.70E+1	1.85E+1	1.56E+3	9.52E+0	3.60E+0	1.28E+1	-1.15E+3	4.37E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.70E+2	3.65E-2	1.42E+2	4.12E+2	1.60E-1	4.25E-1	1.99E-1	-1.71E+2	2.42E+2
PERM	MJ	0	8.12E-1	0	8.12E-1	0	0	0	0	8.12E-1
PERT	MJ	2.70E+2	8.48E-1	1.42E+2	4.13E+2	1.60E-1	4.25E-1	1.99E-1	-1.71E+2	2.42E+2
PENRE	MJ	5.12E+3	5.99E+0	2.24E+1	5.15E+3	1.18E+1	8.39E+0	5.31E+0	-1.57E+3	3.61E+3
PENRM	MJ	0	6.89E+1	0	6.89E+1	0	0	0	0	6.89E+1
PENRT	MJ	5.12E+3	7.48E+1	2.24E+1	5.22E+3	1.18E+1	8.39E+0	5.31E+0	-1.57E+3	3.68E+3
PET	MJ	5.39E+3	7.57E+1	1.64E+2	5.63E+3	1.20E+1	8.81E+0	5.51E+0	-1.74E+3	3.92E+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	1.74E+0	8.18E-3	1.59E-2	1.76E+0	1.26E-3	2.57E-2	6.19E-3	-9.99E-2	1.70E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.66E-4	1.69E-4	2.29E-5	9.58E-4	2.85E-5	4.00E-5	6.01E-6	-1.75E-3	-7.20E-4
NHWD	kg	5.96E+0	4.13E+0	3.76E-1	1.05E+1	6.90E-1	8.11E-1	2.21E+1	-1.13E+0	3.29E+1
RWD	kg	2.98E-3	4.65E-4	3.35E-5	3.48E-3	7.57E-5	3.00E-5	3.28E-5	-6.50E-4	2.97E-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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