

Environmental Profile

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

Ecochain v3.5.80



Product: 4066384 - PERT/EVOH/PERT Pipe IV 20x2.0 L=480 Pro5
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	1.01E+2	3.83E+0	1.93E+1	1.24E+2	5.88E-1	1.20E+2	2.58E+0	-6.85E+1	1.79E+2
GWP-f	kg CO2 eq	1.13E+2	3.83E+0	1.82E+1	1.35E+2	5.88E-1	1.07E+2	2.58E+0	-6.85E+1	1.77E+2
GWP-b	kg CO2 eq	-1.20E+1	1.45E-3	1.13E+0	-1.08E+1	3.57E-4	1.25E+1	1.96E-3	9.65E-2	1.76E+0
GWP-luluc	kg CO2 eq	5.40E-2	1.53E-3	1.73E-2	7.28E-2	2.08E-4	2.72E-4	3.79E-5	-8.81E-3	6.45E-2
ODP	kg CFC11 eq	3.27E-6	8.36E-7	1.03E-6	5.13E-6	1.35E-7	1.16E-7	5.56E-8	-7.18E-6	-1.74E-6
AP	mol H+ eq	4.20E-1	3.38E-2	1.70E-1	6.24E-1	3.35E-3	1.31E-2	1.33E-3	-5.93E-2	5.82E-1
EP-fw	kg P eq	2.08E-3	3.60E-5	9.58E-4	3.07E-3	4.84E-6	1.36E-5	1.74E-6	-1.68E-4	2.92E-3
EP-m	kg N eq	7.35E-2	1.04E-2	1.87E-2	1.03E-1	1.20E-3	5.89E-3	9.89E-4	-1.88E-2	9.19E-2
EP-T	mol N eq	8.27E-1	1.15E-1	2.19E-1	1.16E+0	1.32E-2	6.69E-2	5.39E-3	-2.09E-1	1.04E+0
POCP	kg NMVOC eq	3.87E-1	3.19E-2	7.38E-2	4.93E-1	3.77E-3	1.78E-2	2.11E-3	-6.96E-2	4.47E-1
ADP-mm	kg Sb eq	1.31E-3	8.91E-5	2.24E-3	3.64E-3	1.52E-5	6.35E-6	1.34E-6	-4.63E-5	3.62E-3
ADP-f	MJ	3.88E+3	5.67E+1	1.64E+2	4.10E+3	9.02E+0	6.44E+0	4.06E+0	-1.14E+3	2.97E+3
WDP	m3 depriv.	8.87E+1	1.91E-1	6.14E+0	9.50E+1	2.77E-2	2.16E-1	2.02E-2	-2.95E+0	9.23E+1
PM	disease inc.	3.66E-6	3.18E-7	1.08E-6	5.05E-6	5.30E-8	1.07E-7	2.79E-8	-3.89E-7	4.85E-6
IR	kBq U-235 eq	2.64E+0	2.38E-1	1.35E-1	3.02E+0	3.94E-2	2.11E-2	1.89E-2	-3.87E-1	2.71E+0
ETP-fw	CTUe	7.77E+2	4.92E+1	1.39E+3	2.22E+3	7.32E+0	3.41E+1	3.74E+0	-1.42E+2	2.12E+3
HTP-c	CTUh	3.81E-8	1.72E-9	7.10E-8	1.11E-7	2.61E-10	1.43E-8	1.00E-10	-9.03E-9	1.17E-7
HTP-nc	CTUh	7.66E-7	5.27E-8	1.80E-6	2.62E-6	8.73E-9	1.08E-7	2.32E-9	-1.01E-7	2.63E-6
SQP	Pt	1.20E+3	4.52E+1	2.58E+2	1.50E+3	7.72E+0	2.99E+0	1.04E+1	-9.23E+2	5.98E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.17E+2	3.62E-2	2.73E+3	2.94E+3	1.29E-1	3.46E-1	1.61E-1	-1.37E+2	2.81E+3
PERM	MJ	0	6.41E-1	0	6.41E-1	0	0	0	0	6.41E-1
PERT	MJ	2.17E+2	6.77E-1	2.73E+3	2.94E+3	1.29E-1	3.46E-1	1.61E-1	-1.37E+2	2.81E+3
PENRE	MJ	4.16E+3	5.88E+0	1.75E+2	4.34E+3	9.58E+0	6.89E+0	4.31E+0	-1.27E+3	3.10E+3
PENRM	MJ	0	5.44E+1	0	5.44E+1	0	0	0	0	5.44E+1
PENRT	MJ	4.16E+3	6.02E+1	1.75E+2	4.40E+3	9.58E+0	6.89E+0	4.31E+0	-1.27E+3	3.15E+3
PET	MJ	4.38E+3	6.09E+1	2.90E+3	7.34E+3	9.71E+0	7.24E+0	4.47E+0	-1.41E+3	5.96E+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	1.45E+0	6.51E-3	1.71E-1	1.62E+0	1.02E-3	2.08E-2	5.01E-3	-8.08E-2	1.57E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.27E-4	1.35E-4	1.86E-5	7.81E-4	2.31E-5	3.34E-5	4.89E-6	-1.42E-3	-5.75E-4
NHWD	kg	4.96E+0	3.26E+0	4.20E-1	8.64E+0	5.59E-1	6.87E-1	1.79E+1	-9.11E-1	2.69E+1
RWD	kg	2.40E-3	3.75E-4	2.72E-5	2.81E-3	6.13E-5	2.47E-5	2.66E-5	-5.25E-4	2.39E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777