

Environmental Profile

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

Ecochain v3.5.80



Product: 4066385 - PERT/EVOH/PERT Pipe IV 20x2.0 L=600 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	1.26E+2	4.79E+0	1.20E+1	1.43E+2	7.35E-1	1.50E+2	3.23E+0	-8.54E+1	2.11E+2
GWP-f	kg CO2 eq	1.41E+2	4.78E+0	1.05E+1	1.56E+2	7.34E-1	1.34E+2	3.23E+0	-8.55E+1	2.09E+2
GWP-b	kg CO2 eq	-1.50E+1	1.81E-3	1.54E+0	-1.34E+1	4.46E-4	1.56E+1	2.44E-3	1.21E-1	2.33E+0
GWP-luluc	kg CO2 eq	6.73E-2	1.91E-3	9.12E-3	7.83E-2	2.60E-4	3.38E-4	4.74E-5	-1.10E-2	6.80E-2
ODP	kg CFC11 eq	4.08E-6	1.05E-6	5.98E-7	5.72E-6	1.69E-7	1.44E-7	6.95E-8	-8.96E-6	-2.86E-6
AP	mol H+ eq	5.24E-1	4.23E-2	8.91E-2	6.55E-1	4.18E-3	1.64E-2	1.66E-3	-7.40E-2	6.04E-1
EP-fw	kg P eq	2.59E-3	4.49E-5	5.10E-4	3.14E-3	6.04E-6	1.69E-5	2.17E-6	-2.10E-4	2.96E-3
EP-m	kg N eq	9.16E-2	1.30E-2	1.04E-2	1.15E-1	1.50E-3	7.34E-3	1.24E-3	-2.35E-2	1.02E-1
EP-T	mol N eq	1.03E+0	1.44E-1	1.19E-1	1.29E+0	1.65E-2	8.34E-2	6.74E-3	-2.61E-1	1.14E+0
POCP	kg NMVOC eq	4.83E-1	3.99E-2	3.98E-2	5.63E-1	4.72E-3	2.22E-2	2.63E-3	-8.69E-2	5.06E-1
ADP-mm	kg Sb eq	1.64E-3	1.11E-4	1.15E-3	2.90E-3	1.90E-5	7.88E-6	1.67E-6	-5.78E-5	2.87E-3
ADP-f	MJ	4.84E+3	7.09E+1	9.21E+1	5.00E+3	1.13E+1	8.00E+0	5.08E+0	-1.43E+3	3.60E+3
WDP	m3 depriv.	1.11E+2	2.39E-1	3.31E+0	1.14E+2	3.46E-2	2.69E-1	2.52E-2	-3.67E+0	1.11E+2
PM	disease inc.	4.56E-6	3.97E-7	5.90E-7	5.55E-6	6.63E-8	1.33E-7	3.49E-8	-4.86E-7	5.30E-6
IR	kBq U-235 eq	3.30E+0	2.98E-1	8.35E-2	3.68E+0	4.93E-2	2.62E-2	2.37E-2	-4.83E-1	3.30E+0
ETP-fw	CTUe	9.68E+2	6.15E+1	7.28E+2	1.76E+3	9.16E+0	4.25E+1	4.68E+0	-1.77E+2	1.64E+3
HTP-c	CTUh	4.76E-8	2.15E-9	3.73E-8	8.70E-8	3.26E-10	1.78E-8	1.25E-10	-1.13E-8	9.40E-8
HTP-nc	CTUh	9.56E-7	6.59E-8	9.38E-7	1.96E-6	1.09E-8	1.34E-7	2.90E-9	-1.26E-7	1.98E-6
SQP	Pt	1.49E+3	5.64E+1	1.36E+2	1.69E+3	9.65E+0	3.69E+0	1.30E+1	-1.15E+3	5.59E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.71E+2	4.52E-2	1.40E+3	1.67E+3	1.62E-1	4.31E-1	2.01E-1	-1.71E+2	1.50E+3
PERM	MJ	0	8.01E-1	0	8.01E-1	0	0	0	0	8.01E-1
PERT	MJ	2.71E+2	8.46E-1	1.40E+3	1.67E+3	1.62E-1	4.31E-1	2.01E-1	-1.71E+2	1.50E+3
PENRE	MJ	5.19E+3	7.35E+0	9.82E+1	5.30E+3	1.20E+1	8.57E+0	5.39E+0	-1.58E+3	3.74E+3
PENRM	MJ	0	6.79E+1	0	6.79E+1	0	0	0	0	6.79E+1
PENRT	MJ	5.19E+3	7.53E+1	9.82E+1	5.37E+3	1.20E+1	8.57E+0	5.39E+0	-1.58E+3	3.81E+3
PET	MJ	5.47E+3	7.61E+1	1.50E+3	7.04E+3	1.21E+1	9.00E+0	5.59E+0	-1.75E+3	5.31E+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	1.80E+0	8.14E-3	9.24E-2	1.90E+0	1.28E-3	2.60E-2	6.27E-3	-1.01E-1	1.84E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.83E-4	1.68E-4	2.32E-5	9.74E-4	2.88E-5	4.16E-5	6.11E-6	-1.77E-3	-7.18E-4
NHWD	kg	6.18E+0	4.07E+0	4.36E-1	1.07E+1	6.99E-1	8.46E-1	2.23E+1	-1.14E+0	3.34E+1
RWD	kg	3.00E-3	4.68E-4	3.39E-5	3.50E-3	7.67E-5	3.06E-5	3.32E-5	-6.55E-4	2.99E-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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