

Environmental Profile

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

Ecochain v3.5.80



Product: 3061244 - PERT/EVOH Pipe IV 20x2.0 L=600 Pro3
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	4.59E+0	4.61E+0	1.35E+2	7.37E-1	1.50E+2	3.24E+0	-8.60E+1	2.03E+2
GWP-f	kg CO2 eq	1.41E+2	4.59E+0	2.98E+0	1.48E+2	7.37E-1	1.34E+2	3.24E+0	-8.61E+1	2.01E+2
GWP-b	kg CO2 eq	-1.49E+1	1.80E-3	1.62E+0	-1.33E+1	4.47E-4	1.56E+1	2.46E-3	1.21E-1	2.44E+0
GWP-luluc	kg CO2 eq	6.68E-2	1.81E-3	1.45E-3	7.01E-2	2.61E-4	3.37E-4	4.70E-5	-1.10E-2	5.97E-2
ODP	kg CFC11 eq	3.99E-6	1.00E-6	1.74E-7	5.16E-6	1.70E-7	1.43E-7	6.97E-8	-9.02E-6	-3.47E-6
AP	mol H+ eq	5.20E-1	3.85E-2	1.34E-2	5.72E-1	4.20E-3	1.64E-2	1.66E-3	-7.43E-2	5.19E-1
EP-fw	kg P eq	2.55E-3	4.36E-5	8.72E-5	2.68E-3	6.06E-6	1.69E-5	2.16E-6	-2.10E-4	2.49E-3
EP-m	kg N eq	9.09E-2	1.20E-2	2.45E-3	1.05E-1	1.50E-3	7.36E-3	1.24E-3	-2.36E-2	9.19E-2
EP-T	mol N eq	1.02E+0	1.33E-1	2.34E-2	1.18E+0	1.65E-2	8.37E-2	6.75E-3	-2.62E-1	1.02E+0
POCP	kg NMVOC eq	4.80E-1	3.69E-2	7.59E-3	5.25E-1	4.73E-3	2.23E-2	2.64E-3	-8.73E-2	4.67E-1
ADP-mm	kg Sb eq	1.63E-3	1.08E-4	1.45E-4	1.88E-3	1.91E-5	7.78E-6	1.67E-6	-5.79E-5	1.85E-3
ADP-f	MJ	4.85E+3	6.82E+1	2.24E+1	4.94E+3	1.13E+1	7.93E+0	5.09E+0	-1.44E+3	3.53E+3
WDP	m3 depriv.	1.10E+2	2.31E-1	6.33E-1	1.11E+2	3.47E-2	2.74E-1	2.35E-2	-3.68E+0	1.08E+2
PM	disease inc.	4.52E-6	3.86E-7	1.24E-7	5.03E-6	6.65E-8	1.33E-7	3.50E-8	-4.87E-7	4.78E-6
IR	kBq U-235 eq	3.33E+0	2.86E-1	3.13E-2	3.65E+0	4.94E-2	2.60E-2	2.37E-2	-4.85E-1	3.26E+0
ETP-fw	CTUe	9.33E+2	5.94E+1	1.07E+2	1.10E+3	9.18E+0	4.25E+1	4.69E+0	-1.78E+2	9.78E+2
HTP-c	CTUh	4.56E-8	2.05E-9	5.62E-9	5.32E-8	3.27E-10	1.69E-8	1.24E-10	-1.13E-8	5.92E-8
HTP-nc	CTUh	9.44E-7	6.38E-8	1.35E-7	1.14E-6	1.09E-8	1.32E-7	2.90E-9	-1.26E-7	1.16E-6
SQP	Pt	1.49E+3	5.50E+1	2.09E+1	1.57E+3	9.67E+0	3.63E+0	1.31E+1	-1.15E+3	4.40E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.71E+2	3.65E-2	1.67E+2	4.38E+2	1.62E-1	4.30E-1	2.02E-1	-1.71E+2	2.68E+2
PERM	MJ	0	7.83E-1	0	7.83E-1	0	0	0	0	7.83E-1
PERT	MJ	2.71E+2	8.19E-1	1.67E+2	4.39E+2	1.62E-1	4.30E-1	2.02E-1	-1.71E+2	2.69E+2
PENRE	MJ	5.20E+3	5.99E+0	2.41E+1	5.23E+3	1.20E+1	8.49E+0	5.40E+0	-1.59E+3	3.67E+3
PENRM	MJ	0	6.64E+1	0	6.64E+1	0	0	0	0	6.64E+1
PENRT	MJ	5.20E+3	7.24E+1	2.41E+1	5.30E+3	1.20E+1	8.49E+0	5.40E+0	-1.59E+3	3.73E+3
PET	MJ	5.48E+3	7.32E+1	1.91E+2	5.74E+3	1.22E+1	8.92E+0	5.60E+0	-1.76E+3	4.00E+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	1.77E+0	7.90E-3	1.75E-2	1.79E+0	1.28E-3	2.61E-2	6.29E-3	-1.01E-1	1.72E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.76E-4	1.64E-4	2.32E-5	9.62E-4	2.89E-5	4.06E-5	6.11E-6	-1.78E-3	-7.42E-4
NHWD	kg	6.03E+0	3.98E+0	3.82E-1	1.04E+1	7.01E-1	8.22E-1	2.24E+1	-1.14E+0	3.32E+1
RWD	kg	3.02E-3	4.50E-4	3.40E-5	3.51E-3	7.69E-5	3.03E-5	3.33E-5	-6.58E-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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