

Environmental Profile

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

Ecochain v3.5.80



Product: 3085341 - PERT/EVOH/PERT Pipe IV 12x1.4 L=600
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	5.58E+1	2.02E+0	2.49E+0	6.03E+1	3.07E-1	6.02E+1	1.35E+0	-3.56E+1	8.65E+1
GWP-f	kg CO2 eq	5.92E+1	2.02E+0	1.84E+0	6.31E+1	3.07E-1	5.65E+1	1.35E+0	-3.57E+1	8.56E+1
GWP-b	kg CO2 eq	-3.48E+0	7.43E-4	6.48E-1	-2.83E+0	1.86E-4	3.72E+0	1.02E-3	2.95E-2	9.23E-1
GWP-luluc	kg CO2 eq	3.49E-2	8.16E-4	1.24E-3	3.70E-2	1.09E-4	1.44E-4	1.98E-5	-3.14E-3	3.41E-2
ODP	kg CFC11 eq	1.68E-6	4.41E-7	1.06E-7	2.23E-6	7.07E-8	6.07E-8	2.90E-8	-3.73E-6	-1.34E-6
AP	mol H+ eq	2.19E-1	1.87E-2	1.19E-2	2.50E-1	1.75E-3	6.85E-3	6.95E-4	-2.86E-2	2.30E-1
EP-fw	kg P eq	1.08E-3	1.88E-5	7.12E-5	1.17E-3	2.52E-6	7.17E-6	9.08E-7	-6.91E-5	1.11E-3
EP-m	kg N eq	3.81E-2	5.71E-3	1.67E-3	4.55E-2	6.25E-4	3.08E-3	5.24E-4	-9.21E-3	4.05E-2
EP-T	mol N eq	4.29E-1	6.31E-2	1.75E-2	5.09E-1	6.89E-3	3.49E-2	2.82E-3	-1.02E-1	4.52E-1
POCP	kg NMVOC eq	2.01E-1	1.74E-2	5.80E-3	2.24E-1	1.97E-3	9.31E-3	1.10E-3	-3.37E-2	2.03E-1
ADP-mm	kg Sb eq	6.80E-4	4.64E-5	1.45E-4	8.71E-4	7.94E-6	3.17E-6	6.98E-7	-1.79E-5	8.65E-4
ADP-f	MJ	2.03E+3	2.99E+1	1.50E+1	2.08E+3	4.71E+0	3.28E+0	2.12E+0	-5.96E+2	1.49E+3
WDP	m3 depriv.	4.66E+1	9.95E-2	4.84E-1	4.72E+1	1.45E-2	1.17E-1	1.05E-2	-1.43E+0	4.59E+1
PM	disease inc.	1.87E-6	1.66E-7	8.98E-8	2.13E-6	2.77E-8	5.52E-8	1.46E-8	-1.52E-7	2.07E-6
IR	kBq U-235 eq	1.37E+0	1.25E-1	1.71E-2	1.52E+0	2.06E-2	1.05E-2	9.89E-3	-1.85E-1	1.37E+0
ETP-fw	CTUe	4.02E+2	2.58E+1	9.62E+1	5.24E+2	3.82E+0	1.87E+1	1.98E+0	-6.22E+1	4.86E+2
HTP-c	CTUh	1.88E-8	9.10E-10	4.97E-9	2.47E-8	1.36E-10	7.51E-9	5.23E-11	-3.72E-9	2.87E-8
HTP-nc	CTUh	3.97E-7	2.75E-8	1.23E-7	5.47E-7	4.56E-9	5.67E-8	1.22E-9	-4.40E-8	5.65E-7
SQP	Pt	3.93E+2	2.35E+1	1.82E+1	4.35E+2	4.03E+0	1.48E+0	5.44E+0	-2.82E+2	1.64E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.00E+1	2.18E-2	1.73E+2	2.53E+2	6.76E-2	1.83E-1	8.41E-2	-4.15E+1	2.11E+2
PERM	MJ	0	3.32E-1	0	3.32E-1	0	0	0	0	3.32E-1
PERT	MJ	8.00E+1	3.54E-1	1.73E+2	2.53E+2	6.76E-2	1.83E-1	8.41E-2	-4.15E+1	2.12E+2
PENRE	MJ	2.18E+3	3.55E+0	1.61E+1	2.20E+3	5.00E+0	3.51E+0	2.25E+0	-6.60E+2	1.55E+3
PENRM	MJ	0	2.81E+1	0	2.81E+1	0	0	0	0	2.81E+1
PENRT	MJ	2.18E+3	3.17E+1	1.61E+1	2.23E+3	5.00E+0	3.51E+0	2.25E+0	-6.60E+2	1.58E+3
PET	MJ	2.26E+3	3.21E+1	1.89E+2	2.48E+3	5.07E+0	3.70E+0	2.33E+0	-7.02E+2	1.79E+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	7.66E-1	3.40E-3	1.34E-2	7.83E-1	5.33E-4	1.10E-2	2.62E-3	-3.87E-2	7.58E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.11E-4	7.02E-5	9.37E-6	3.90E-4	1.20E-5	1.73E-5	2.55E-6	-7.30E-4	-3.07E-4
NHWD	kg	2.51E+0	1.69E+0	1.59E-1	4.36E+0	2.92E-1	3.74E-1	9.33E+0	-3.67E-1	1.40E+1
RWD	kg	1.24E-3	1.97E-4	1.37E-5	1.45E-3	3.20E-5	1.20E-5	1.39E-5	-2.54E-4	1.26E-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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