

Environmental Profile

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

Ecochain v3.5.71



Product: 3039852 - Irish Pb Pipe 1/2i W Barrier L=6
Unit: 1 piece
Manufacturer: Wavin - UK - Doncaster - Verified

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 09-02-2023
End of validity: 09-02-2028
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 - UK - Doncaster - Verified (2020). (☑ = 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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.69E+0	3.47E-2	2.04E-1	1.93E+0	1.10E-2	3.05E-1	4.79E-3	-8.97E-1	1.35E+0
GWP-f	kg CO2 eq	1.68E+0	3.47E-2	1.89E-1	1.90E+0	1.10E-2	3.06E-1	4.79E-3	-8.93E-1	1.33E+0
GWP-b	kg CO2 eq	7.32E-3	1.97E-5	1.49E-2	2.22E-2	6.70E-6	-4.34E-4	4.79E-6	-3.52E-3	1.83E-2
GWP-luluc	kg CO2 eq	1.38E-4	1.27E-5	6.78E-5	2.19E-4	3.90E-6	6.58E-5	9.29E-8	-1.36E-5	2.75E-4
ODP	kg CFC11 eq	2.35E-8	7.95E-9	2.18E-8	5.33E-8	2.54E-9	9.59E-9	1.31E-10	-1.58E-8	4.97E-8
AP	mol H+ eq	1.09E-2	2.43E-4	4.41E-4	1.15E-2	6.28E-5	3.64E-4	3.23E-6	-4.46E-3	7.51E-3
EP-fw	kg P eq	9.21E-6	2.78E-7	1.30E-6	1.08E-5	9.08E-8	1.93E-6	4.27E-9	-1.05E-6	1.18E-5
EP-m	kg N eq	1.28E-3	8.10E-5	9.56E-5	1.46E-3	2.25E-5	1.07E-4	5.87E-6	-5.94E-4	9.98E-4
EP-T	mol N eq	1.41E-2	8.94E-4	9.17E-4	1.59E-2	2.48E-4	1.17E-3	1.29E-5	-6.49E-3	1.08E-2
POCP	kg NMVOC eq	7.36E-3	2.51E-4	2.98E-4	7.91E-3	7.08E-5	3.63E-4	4.69E-6	-3.55E-3	4.80E-3
ADP-mm	kg Sb eq	1.32E-5	8.66E-7	1.83E-6	1.59E-5	2.85E-7	1.40E-6	3.17E-9	-3.54E-7	1.72E-5
ADP-f	MJ	3.74E+1	5.29E-1	2.67E+0	4.06E+1	1.69E-1	1.11E+0	9.62E-3	-1.97E+1	2.22E+1
WDP	m3 depriv.	3.40E-1	1.58E-3	2.58E-2	3.67E-1	5.20E-4	2.36E-2	4.44E-5	-9.88E-2	2.93E-1
PM	disease inc.	8.37E-8	3.03E-9	3.23E-9	9.00E-8	9.96E-10	5.72E-9	6.56E-11	-3.78E-8	5.90E-8
IR	kBq U-235 eq	8.33E-3	2.31E-3	2.25E-3	1.29E-2	7.40E-4	3.38E-3	4.63E-5	-1.24E-3	1.58E-2
ETP-fw	CTUe	5.33E+0	4.25E-1	2.25E+0	8.01E+0	1.37E-1	1.85E+0	2.17E-2	-6.83E-1	9.33E+0
HTP-c	CTUh	4.98E-10	1.55E-11	9.39E-11	6.07E-10	4.89E-12	1.53E-10	2.54E-13	-6.44E-11	7.01E-10
HTP-nc	CTUh	7.37E-9	5.01E-10	1.97E-9	9.83E-9	1.64E-10	2.00E-9	8.35E-12	-1.60E-9	1.04E-8
SQP	Pt	1.58E+0	4.37E-1	3.19E-1	2.33E+0	1.45E-1	8.69E-1	2.44E-2	-9.96E-2	3.27E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.91E-1	7.41E-3	4.31E+0	4.71E+0	2.43E-3	5.68E-2	4.40E-4	-9.81E-2	4.67E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.91E-1	7.41E-3	4.31E+0	4.71E+0	2.43E-3	5.68E-2	4.40E-4	-9.81E-2	4.67E+0
PENRE	MJ	4.01E+1	5.61E-1	2.93E+0	4.36E+1	1.80E-1	1.18E+0	1.02E-2	-2.12E+1	2.38E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.01E+1	5.61E-1	2.93E+0	4.36E+1	1.80E-1	1.18E+0	1.02E-2	-2.12E+1	2.38E+1
PET	MJ	4.05E+1	5.69E-1	7.24E+0	4.83E+1	1.82E-1	1.24E+0	1.06E-2	-2.13E+1	2.85E+1
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	8.03E-3	5.84E-5	7.65E-4	8.85E-3	1.92E-5	6.87E-4	1.20E-5	-2.08E-3	7.49E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.39E-6	1.32E-6	2.87E-6	8.57E-6	4.33E-7	1.84E-6	1.15E-8	-2.52E-6	8.33E-6
NHWD	kg	1.17E-1	3.15E-2	1.34E-2	1.62E-1	1.05E-2	5.33E-2	4.19E-2	-9.66E-3	2.58E-1
RWD	kg	8.36E-6	3.60E-6	2.17E-6	1.41E-5	1.15E-6	4.22E-6	6.34E-8	-1.37E-6	1.82E-5
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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