

Environmental Profile

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

Ecochain v3.5.71



Product: 3038780 - Irish Barrier Pipe W 1/2" Barrier L=100
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	2.79E+1	5.76E-1	3.38E+0	3.18E+1	1.79E-1	5.70E+0	7.80E-2	-1.51E+1	2.27E+1
GWP-f	kg CO2 eq	2.79E+1	5.76E-1	3.14E+0	3.16E+1	1.79E-1	5.39E+0	7.80E-2	-1.49E+1	2.24E+1
GWP-b	kg CO2 eq	-5.83E-2	3.27E-4	2.42E-1	1.84E-1	1.09E-4	3.01E-1	7.79E-5	-1.94E-1	2.91E-1
GWP-luluc	kg CO2 eq	2.42E-3	2.11E-4	1.18E-3	3.80E-3	6.33E-5	9.81E-4	1.51E-6	-1.65E-4	4.68E-3
ODP	kg CFC11 eq	2.79E-7	1.32E-7	3.59E-7	7.69E-7	4.12E-8	1.48E-7	2.12E-9	-2.34E-7	7.26E-7
AP	mol H+ eq	1.80E-1	4.03E-3	7.55E-3	1.92E-1	1.02E-3	5.80E-3	5.25E-5	-7.34E-2	1.25E-1
EP-fw	kg P eq	1.55E-4	4.62E-6	2.20E-5	1.82E-4	1.47E-6	2.98E-5	6.94E-8	-1.41E-5	1.99E-4
EP-m	kg N eq	2.13E-2	1.34E-3	1.61E-3	2.43E-2	3.65E-4	1.73E-3	9.64E-5	-9.80E-3	1.66E-2
EP-T	mol N eq	2.35E-1	1.48E-2	1.56E-2	2.65E-1	4.02E-3	1.89E-2	2.09E-4	-1.07E-1	1.81E-1
POCP	kg NMVOC eq	1.23E-1	4.17E-3	5.04E-3	1.32E-1	1.15E-3	5.81E-3	7.62E-5	-5.86E-2	8.05E-2
ADP-mm	kg Sb eq	2.14E-4	1.44E-5	3.19E-5	2.60E-4	4.63E-6	2.22E-5	5.14E-8	-3.64E-6	2.84E-4
ADP-f	MJ	6.24E+2	8.77E+0	4.42E+1	6.77E+2	2.75E+0	1.76E+1	1.56E-1	-3.26E+2	3.71E+2
WDP	m3 depriv.	5.78E+0	2.63E-2	4.34E-1	6.24E+0	8.43E-3	3.68E-1	7.21E-4	-1.48E+0	5.14E+0
PM	disease inc.	1.39E-6	5.03E-8	5.54E-8	1.50E-6	1.62E-8	9.04E-8	1.06E-9	-6.22E-7	9.84E-7
IR	kBq U-235 eq	1.37E-1	3.83E-2	3.76E-2	2.13E-1	1.20E-2	5.36E-2	7.52E-4	-1.66E-2	2.63E-1
ETP-fw	CTUe	8.88E+1	7.05E+0	3.89E+1	1.35E+2	2.23E+0	2.68E+1	3.20E-1	-1.05E+1	1.54E+2
HTP-c	CTUh	8.41E-9	2.58E-10	1.62E-9	1.03E-8	7.94E-11	2.48E-9	4.12E-12	-1.03E-9	1.18E-8
HTP-nc	CTUh	1.23E-7	8.32E-9	3.40E-8	1.65E-7	2.66E-9	3.19E-8	1.30E-10	-2.32E-8	1.76E-7
SQP	Pt	4.09E+1	7.24E+0	5.48E+0	5.36E+1	2.35E+0	2.71E+0	3.97E-1	-2.06E+0	5.70E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.66E+0	1.23E-1	7.56E+1	8.44E+1	3.94E-2	-7.48E-1	7.16E-3	-1.66E+0	8.20E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.66E+0	1.23E-1	7.56E+1	8.44E+1	3.94E-2	-7.48E-1	7.16E-3	-1.66E+0	8.20E+1
PENRE	MJ	6.70E+2	9.31E+0	4.85E+1	7.28E+2	2.92E+0	1.87E+1	1.66E-1	-3.52E+2	3.97E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.70E+2	9.31E+0	4.85E+1	7.28E+2	2.92E+0	1.87E+1	1.66E-1	-3.52E+2	3.97E+2
PET	MJ	6.78E+2	9.43E+0	1.24E+2	8.12E+2	2.96E+0	1.80E+1	1.73E-1	-3.54E+2	4.79E+2
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	1.37E-1	9.69E-4	1.30E-2	1.51E-1	3.11E-4	1.08E-2	1.94E-4	-3.29E-2	1.29E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.84E-5	2.18E-5	4.68E-5	1.37E-4	7.03E-6	2.90E-5	1.86E-7	-4.59E-5	1.27E-4
NHWD	kg	1.95E+0	5.22E-1	2.18E-1	2.69E+0	1.70E-1	8.82E-1	6.81E-1	-1.54E-1	4.27E+0
RWD	kg	1.37E-4	5.97E-5	3.54E-5	2.32E-4	1.87E-5	6.73E-5	1.03E-6	-1.99E-5	2.99E-4
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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