

Environmental Profile

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

Ecochain v3.5.71



Product: 3038738 - Elbow Conversion 1"Irishx28mm
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	9.79E-1	1.42E-2	5.40E-2	1.05E+0	3.22E-3	1.03E-1	1.43E-3	-4.95E-1	6.60E-1
GWP-f	kg CO2 eq	9.77E-1	1.42E-2	5.03E-2	1.04E+0	3.21E-3	1.03E-1	1.43E-3	-4.94E-1	6.55E-1
GWP-b	kg CO2 eq	2.06E-3	8.19E-6	3.72E-3	5.79E-3	1.95E-6	-1.23E-4	1.44E-6	-1.02E-3	4.65E-3
GWP-luluc	kg CO2 eq	4.09E-5	5.16E-6	2.07E-5	6.68E-5	1.14E-6	1.86E-5	2.78E-8	-2.24E-6	8.42E-5
ODP	kg CFC11 eq	8.67E-9	3.25E-9	5.61E-9	1.75E-8	7.41E-10	2.66E-9	3.90E-11	-4.41E-9	1.66E-8
AP	mol H+ eq	4.45E-3	9.46E-5	1.29E-4	4.67E-3	1.83E-5	1.05E-4	9.67E-7	-1.84E-3	2.95E-3
EP-fw	kg P eq	1.12E-5	1.14E-7	3.70E-7	1.17E-5	2.64E-8	5.44E-7	1.28E-9	-4.40E-6	7.83E-6
EP-m	kg N eq	8.27E-4	3.20E-5	2.66E-5	8.86E-4	6.55E-6	3.13E-5	1.83E-6	-3.86E-4	5.39E-4
EP-T	mol N eq	8.36E-3	3.53E-4	2.61E-4	8.97E-3	7.22E-5	3.42E-4	3.85E-6	-3.87E-3	5.52E-3
POCP	kg NMVOC eq	3.13E-3	9.97E-5	8.43E-5	3.31E-3	2.06E-5	1.06E-4	1.40E-6	-1.45E-3	1.98E-3
ADP-mm	kg Sb eq	1.48E-5	3.57E-7	5.68E-7	1.57E-5	8.31E-8	3.97E-7	9.45E-10	-2.80E-6	1.34E-5
ADP-f	MJ	1.30E+1	2.16E-1	7.03E-1	1.39E+1	4.93E-2	3.16E-1	2.87E-3	-6.59E+0	7.67E+0
WDP	m3 depriv.	3.00E-1	6.53E-4	7.19E-3	3.07E-1	1.51E-4	6.75E-3	1.33E-5	-1.25E-1	1.90E-1
PM	disease inc.	3.81E-8	1.25E-9	9.48E-10	4.03E-8	2.90E-10	1.63E-9	1.96E-11	-1.68E-8	2.54E-8
IR	kBq U-235 eq	3.29E-3	9.45E-4	6.13E-4	4.85E-3	2.16E-4	9.60E-4	1.39E-5	-2.73E-4	5.77E-3
ETP-fw	CTUe	2.04E+0	1.75E-1	6.79E-1	2.89E+0	4.01E-2	5.08E-1	6.06E-3	-3.43E-1	3.10E+0
HTP-c	CTUh	1.95E-10	6.33E-12	2.80E-11	2.29E-10	1.43E-12	4.38E-11	7.61E-14	-3.94E-11	2.35E-10
HTP-nc	CTUh	3.05E-9	2.06E-10	5.95E-10	3.85E-9	4.77E-11	5.71E-10	2.44E-12	-8.41E-10	3.63E-9
SQP	Pt	5.17E-1	1.80E-1	9.42E-2	7.91E-1	4.22E-2	2.48E-1	7.29E-3	-2.81E-2	1.06E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.29E-1	3.05E-3	1.36E+0	1.49E+0	7.08E-4	1.60E-2	1.33E-4	-3.14E-2	1.48E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.29E-1	3.05E-3	1.36E+0	1.49E+0	7.08E-4	1.60E-2	1.33E-4	-3.14E-2	1.48E+0
PENRE	MJ	1.40E+1	2.30E-1	7.70E-1	1.50E+1	5.24E-2	3.37E-1	3.05E-3	-7.14E+0	8.25E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.40E+1	2.30E-1	7.70E-1	1.50E+1	5.24E-2	3.37E-1	3.05E-3	-7.14E+0	8.25E+0
PET	MJ	1.41E+1	2.33E-1	2.13E+0	1.65E+1	5.31E-2	3.53E-1	3.18E-3	-7.17E+0	9.73E+0
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	7.10E-3	2.41E-5	2.17E-4	7.34E-3	5.58E-6	2.12E-4	3.58E-6	-2.91E-3	4.65E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.35E-6	5.43E-7	7.20E-7	2.61E-6	1.26E-7	5.33E-7	3.42E-9	-8.20E-7	2.46E-6
NHWD	kg	3.99E-2	1.30E-2	3.36E-3	5.63E-2	3.06E-3	1.56E-2	1.25E-2	-4.28E-3	8.31E-2
RWD	kg	3.93E-6	1.47E-6	5.44E-7	5.95E-6	3.35E-7	1.20E-6	1.89E-8	-3.63E-7	7.14E-6
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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