

Environmental Profile

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

Ecochain v3.5.71



Product: 3038746 - Irish Acorn Reducer W Sp/S 3/4ix1/2i
 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	☑	☑	☑	☑									

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	4.21E-1	2.56E-3	3.38E-2	4.57E-1	2.13E-3	1.47E-2	1.85E-4	-1.29E-1	3.45E-1
GWP-f	kg CO2 eq	4.20E-1	2.56E-3	3.14E-2	4.54E-1	2.13E-3	1.47E-2	1.85E-4	-1.27E-1	3.44E-1
GWP-b	kg CO2 eq	2.29E-4	1.52E-6	2.42E-3	2.65E-3	1.30E-6	-7.81E-5	2.21E-7	-1.52E-3	1.06E-3
GWP-luluc	kg CO2 eq	4.89E-4	9.16E-7	1.18E-5	5.02E-4	7.55E-7	3.14E-6	1.30E-8	-1.44E-4	3.62E-4
ODP	kg CFC11 eq	2.19E-8	5.89E-10	3.58E-9	2.61E-8	4.91E-10	4.59E-10	1.90E-11	-6.19E-9	2.09E-8
AP	mol H+ eq	2.82E-2	1.56E-5	7.54E-5	2.83E-2	1.21E-5	2.57E-5	4.46E-7	-2.27E-3	2.60E-2
EP-fw	kg P eq	2.24E-4	2.09E-8	2.20E-7	2.24E-4	1.76E-8	1.36E-7	5.40E-10	-1.83E-5	2.06E-4
EP-m	kg N eq	1.50E-3	5.44E-6	1.61E-5	1.52E-3	4.35E-6	6.60E-6	3.09E-7	-2.76E-4	1.25E-3
EP-T	mol N eq	2.16E-2	6.00E-5	1.55E-4	2.19E-2	4.79E-5	7.43E-5	1.71E-6	-3.74E-3	1.82E-2
POCP	kg NMVOC eq	5.82E-3	1.71E-5	5.03E-5	5.89E-3	1.37E-5	2.15E-5	5.26E-7	-9.01E-4	5.02E-3
ADP-mm	kg Sb eq	1.78E-3	6.55E-8	3.19E-7	1.78E-3	5.52E-8	1.07E-7	4.31E-10	-8.30E-4	9.50E-4
ADP-f	MJ	4.92E+0	3.92E-2	4.42E-1	5.40E+0	3.27E-2	4.91E-2	1.31E-3	-1.65E+0	3.84E+0
WDP	m3 depriv.	2.99E-1	1.19E-4	4.34E-3	3.04E-1	1.00E-4	6.66E-4	4.69E-5	-8.38E-2	2.21E-1
PM	disease inc.	6.56E-8	2.29E-10	5.53E-10	6.64E-8	1.93E-10	3.72E-10	8.73E-12	-9.29E-9	5.77E-8
IR	kBq U-235 eq	1.52E-2	1.71E-4	3.75E-4	1.57E-2	1.43E-4	1.83E-4	5.61E-6	-5.94E-3	1.01E-2
ETP-fw	CTUe	2.75E+2	3.17E-2	3.89E-1	2.76E+2	2.66E-2	1.32E-1	1.29E-3	-3.89E+1	2.37E+2
HTP-c	CTUh	4.01E-9	1.14E-12	1.61E-11	4.02E-9	9.46E-13	6.29E-12	2.31E-14	-8.73E-10	3.16E-9
HTP-nc	CTUh	3.22E-7	3.77E-11	3.40E-10	3.22E-7	3.17E-11	1.43E-10	7.22E-13	-5.56E-8	2.67E-7
SQP	Pt	4.30E+0	3.32E-2	5.47E-2	4.38E+0	2.80E-2	6.01E-2	2.89E-3	-7.78E-1	3.70E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.04E-1	5.59E-4	7.55E-1	1.66E+0	4.70E-4	4.16E-3	2.20E-5	-2.34E-1	1.43E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.04E-1	5.59E-4	7.55E-1	1.66E+0	4.70E-4	4.16E-3	2.20E-5	-2.34E-1	1.43E+0
PENRE	MJ	5.26E+0	4.16E-2	4.84E-1	5.79E+0	3.48E-2	5.23E-2	1.40E-3	-1.77E+0	4.11E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.26E+0	4.16E-2	4.84E-1	5.79E+0	3.48E-2	5.23E-2	1.40E-3	-1.77E+0	4.11E+0
PET	MJ	6.17E+0	4.22E-2	1.24E+0	7.45E+0	3.52E-2	5.64E-2	1.42E-3	-2.00E+0	5.54E+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	7.83E-3	4.41E-6	1.29E-4	7.97E-3	3.70E-6	2.86E-5	1.46E-6	-2.23E-3	5.77E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.22E-4	9.95E-8	4.68E-7	2.22E-4	8.37E-8	1.09E-7	1.87E-9	-1.04E-4	1.18E-4
NHWD	kg	1.11E-1	2.40E-3	2.18E-3	1.15E-1	2.03E-3	2.16E-3	8.20E-3	-3.64E-2	9.12E-2
RWD	kg	1.30E-5	2.67E-7	3.54E-7	1.37E-5	2.23E-7	2.26E-7	8.64E-9	-4.75E-6	9.38E-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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