

# Environmental Profile

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

Ecochain v3.5.71



Product: 3038737 - Straight Conversion 3/4" Irishx22mm  
 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]

## 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	4.70E-1	6.75E-3	3.50E-2	5.12E-1	1.58E-3	5.30E-2	7.09E-4	-2.37E-1	3.30E-1
GWP-f	kg CO2 eq	4.69E-1	6.75E-3	3.28E-2	5.09E-1	1.58E-3	5.30E-2	7.09E-4	-2.37E-1	3.27E-1
GWP-b	kg CO2 eq	9.60E-4	3.89E-6	2.27E-3	3.23E-3	9.60E-7	-5.97E-5	7.12E-7	-4.95E-4	2.68E-3
GWP-luluc	kg CO2 eq	2.27E-5	2.45E-6	1.52E-5	4.04E-5	5.59E-7	9.07E-6	1.38E-8	-1.19E-6	4.89E-5
ODP	kg CFC11 eq	4.94E-9	1.55E-9	3.52E-9	1.00E-8	3.64E-10	1.30E-9	1.94E-11	-2.28E-9	9.42E-9
AP	mol H+ eq	2.16E-3	4.50E-5	9.20E-5	2.30E-3	9.00E-6	5.18E-5	4.80E-7	-8.87E-4	1.47E-3
EP-fw	kg P eq	5.36E-6	5.44E-8	2.57E-7	5.67E-6	1.30E-8	2.66E-7	6.35E-10	-2.05E-6	3.90E-6
EP-m	kg N eq	3.96E-4	1.52E-5	1.81E-5	4.30E-4	3.22E-6	1.55E-5	9.08E-7	-1.84E-4	2.66E-4
EP-T	mol N eq	4.03E-3	1.68E-4	1.81E-4	4.38E-3	3.55E-5	1.69E-4	1.91E-6	-1.85E-3	2.74E-3
POCP	kg NMVOC eq	1.52E-3	4.75E-5	5.82E-5	1.63E-3	1.01E-5	5.20E-5	6.95E-7	-7.00E-4	9.88E-4
ADP-mm	kg Sb eq	8.55E-6	1.70E-7	4.22E-7	9.15E-6	4.09E-8	1.94E-7	4.69E-10	-1.34E-6	8.04E-6
ADP-f	MJ	6.37E+0	1.03E-1	4.52E-1	6.93E+0	2.43E-2	1.55E-1	1.42E-3	-3.22E+0	3.89E+0
WDP	m3 depriv.	1.43E-1	3.10E-4	4.91E-3	1.48E-1	7.45E-5	3.33E-3	6.59E-6	-5.85E-2	9.32E-2
PM	disease inc.	1.85E-8	5.94E-10	6.74E-10	1.98E-8	1.43E-10	7.99E-10	9.71E-12	-8.08E-9	1.27E-8
IR	kBq U-235 eq	1.87E-3	4.50E-4	4.09E-4	2.73E-3	1.06E-4	4.70E-4	6.88E-6	-1.47E-4	3.16E-3
ETP-fw	CTUe	1.06E+0	8.30E-2	4.94E-1	1.64E+0	1.97E-2	2.53E-1	3.01E-3	-1.66E-1	1.75E+0
HTP-c	CTUh	9.65E-11	3.01E-12	2.02E-11	1.20E-10	7.01E-13	2.14E-11	3.77E-14	-1.88E-11	1.23E-10
HTP-nc	CTUh	1.52E-9	9.82E-11	4.34E-10	2.05E-9	2.35E-11	2.81E-10	1.21E-12	-4.03E-10	1.96E-9
SQP	Pt	2.85E-1	8.58E-2	6.73E-2	4.38E-1	2.08E-2	1.21E-1	3.62E-3	-1.47E-2	5.69E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.60E-2	1.45E-3	1.02E+0	1.09E+0	3.48E-4	7.84E-3	6.58E-5	-1.53E-2	1.08E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.60E-2	1.45E-3	1.02E+0	1.09E+0	3.48E-4	7.84E-3	6.58E-5	-1.53E-2	1.08E+0
PENRE	MJ	6.87E+0	1.09E-1	4.94E-1	7.48E+0	2.58E-2	1.65E-1	1.51E-3	-3.48E+0	4.19E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.87E+0	1.09E-1	4.94E-1	7.48E+0	2.58E-2	1.65E-1	1.51E-3	-3.48E+0	4.19E+0
PET	MJ	6.94E+0	1.11E-1	1.51E+0	8.57E+0	2.61E-2	1.73E-1	1.58E-3	-3.50E+0	5.27E+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	3.39E-3	1.14E-5	1.51E-4	3.56E-3	2.75E-6	1.07E-4	1.77E-6	-1.37E-3	2.30E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.65E-7	2.58E-7	4.40E-7	1.46E-6	6.21E-8	2.63E-7	1.70E-9	-4.23E-7	1.37E-6
NHWD	kg	2.00E-2	6.19E-3	2.06E-3	2.82E-2	1.50E-3	7.66E-3	6.21E-3	-2.06E-3	4.15E-2
RWD	kg	2.27E-6	7.01E-7	3.33E-7	3.30E-6	1.65E-7	5.88E-7	9.39E-9	-1.96E-7	3.87E-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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