

Environmental Profile

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

Ecochain v3.5.80



Product: 3025433 - Gutter Support Bracket LGY 16 + Rafter
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 08-06-2023
End of validity: 08-06-2028
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 - PL -Buk - Extra products (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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.11E-1	3.11E-3	1.45E-4	3.15E-1	7.11E-4	7.30E-2	2.28E-4	-1.08E-1	2.80E-1
GWP-f	kg CO2 eq	3.42E-1	3.11E-3	1.46E-4	3.45E-1	7.11E-4	3.66E-2	2.28E-4	-1.16E-1	2.67E-1
GWP-b	kg CO2 eq	-3.09E-2	1.89E-6	-1.54E-6	-3.09E-2	4.32E-7	3.64E-2	2.70E-7	7.89E-3	1.34E-2
GWP-luluc	kg CO2 eq	3.55E-4	1.10E-6	1.49E-7	3.56E-4	2.52E-7	1.21E-5	6.57E-9	-3.33E-5	3.35E-4
ODP	kg CFC11 eq	5.04E-8	7.16E-10	8.26E-12	5.11E-8	1.64E-10	3.33E-9	8.36E-12	-1.82E-8	3.64E-8
AP	mol H+ eq	1.74E-3	1.77E-5	1.47E-6	1.76E-3	4.05E-6	8.82E-5	2.06E-7	-4.57E-4	1.40E-3
EP-fw	kg P eq	1.92E-5	2.56E-8	8.24E-9	1.92E-5	5.85E-9	4.59E-7	2.86E-10	-4.47E-6	1.52E-5
EP-m	kg N eq	3.16E-4	6.33E-6	1.55E-7	3.23E-4	1.45E-6	2.38E-5	1.19E-7	-8.82E-5	2.60E-4
EP-T	mol N eq	3.46E-3	6.98E-5	1.85E-6	3.53E-3	1.60E-5	2.65E-4	8.14E-7	-1.01E-3	2.80E-3
POCP	kg NMVOC eq	1.30E-3	1.99E-5	6.28E-7	1.32E-3	4.56E-6	7.66E-5	2.81E-7	-5.42E-4	8.56E-4
ADP-mm	kg Sb eq	1.01E-4	8.03E-8	1.97E-8	1.01E-4	1.84E-8	3.71E-7	2.12E-10	-7.76E-7	1.01E-4
ADP-f	MJ	5.34E+0	4.77E-2	1.36E-3	5.39E+0	1.09E-2	1.93E-1	6.12E-4	-1.47E+0	4.12E+0
WDP	m3 depriv.	1.70E-1	1.46E-4	5.22E-5	1.70E-1	3.35E-5	4.59E-3	6.61E-6	-6.82E-2	1.07E-1
PM	disease inc.	2.08E-8	2.80E-10	9.08E-12	2.11E-8	6.42E-11	1.17E-9	4.21E-12	-6.16E-9	1.62E-8
IR	kBq U-235 eq	1.86E-2	2.08E-4	1.02E-6	1.88E-2	4.77E-5	7.66E-4	2.76E-6	-8.41E-4	1.88E-2
ETP-fw	CTUe	1.14E+1	3.87E-2	1.21E-2	1.14E+1	8.86E-3	9.54E-1	8.45E-3	-3.51E+0	8.88E+0
HTP-c	CTUh	1.56E-9	1.38E-12	6.17E-13	1.56E-9	3.15E-13	2.09E-11	1.85E-14	-4.15E-11	1.54E-9
HTP-nc	CTUh	1.99E-8	4.62E-11	1.57E-11	1.99E-8	1.06E-11	5.03E-10	1.66E-12	1.31E-8	3.36E-8
SQP	Pt	4.29E+0	4.08E-2	2.24E-3	4.33E+0	9.33E-3	1.74E-1	1.55E-3	-3.84E+0	6.70E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.07E+0	6.84E-4	2.40E-2	1.09E+0	1.57E-4	1.33E-2	2.11E-5	-6.06E-1	4.99E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.07E+0	6.84E-4	2.40E-2	1.09E+0	1.57E-4	1.33E-2	2.11E-5	-6.06E-1	4.99E-1
PENRE	MJ	5.69E+0	5.06E-2	1.44E-3	5.74E+0	1.16E-2	2.05E-1	6.50E-4	-1.57E+0	4.39E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.69E+0	5.06E-2	1.44E-3	5.74E+0	1.16E-2	2.05E-1	6.50E-4	-1.57E+0	4.39E+0
PET	MJ	6.76E+0	5.13E-2	2.55E-2	6.84E+0	1.17E-2	2.18E-1	6.71E-4	-2.17E+0	4.89E+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	4.06E-3	5.40E-6	1.46E-6	4.07E-3	1.23E-6	1.37E-4	7.37E-7	-1.02E-3	3.18E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.48E-5	1.22E-7	2.73E-13	2.49E-5	2.79E-8	4.10E-7	7.67E-10	-9.60E-6	1.58E-5
NHWD	kg	8.54E-2	2.95E-3	1.05E-6	8.84E-2	6.76E-4	9.54E-3	2.70E-3	-1.12E-2	9.01E-2
RWD	kg	1.73E-5	3.24E-7	1.10E-13	1.77E-5	7.42E-8	9.54E-7	3.95E-9	-1.51E-6	1.72E-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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