

Environmental Profile

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

Ecochain v3.5.80



Product: 3025432 - Gutter Support Bracket Sand 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]

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	3.09E-1	3.08E-3	1.45E-4	3.13E-1	6.85E-4	7.23E-2	2.20E-4	-1.07E-1	2.79E-1
GWP-f	kg CO2 eq	3.40E-1	3.08E-3	1.46E-4	3.43E-1	6.84E-4	3.59E-2	2.20E-4	-1.15E-1	2.65E-1
GWP-b	kg CO2 eq	-3.09E-2	1.87E-6	-1.54E-6	-3.09E-2	4.16E-7	3.64E-2	2.60E-7	7.90E-3	1.34E-2
GWP-luluc	kg CO2 eq	3.53E-4	1.09E-6	1.49E-7	3.54E-4	2.42E-7	1.17E-5	6.36E-9	-3.25E-5	3.34E-4
ODP	kg CFC11 eq	4.92E-8	7.09E-10	8.26E-12	4.99E-8	1.58E-10	3.24E-9	8.05E-12	-1.77E-8	3.57E-8
AP	mol H+ eq	1.74E-3	1.75E-5	1.47E-6	1.75E-3	3.90E-6	8.66E-5	1.98E-7	-4.53E-4	1.39E-3
EP-fw	kg P eq	1.91E-5	2.53E-8	8.24E-9	1.91E-5	5.63E-9	4.47E-7	2.76E-10	-4.43E-6	1.51E-5
EP-m	kg N eq	3.15E-4	6.27E-6	1.55E-7	3.21E-4	1.39E-6	2.34E-5	1.14E-7	-8.74E-5	2.59E-4
EP-T	mol N eq	3.44E-3	6.91E-5	1.85E-6	3.51E-3	1.54E-5	2.61E-4	7.84E-7	-1.00E-3	2.79E-3
POCP	kg NMVOC eq	1.29E-3	1.98E-5	6.28E-7	1.31E-3	4.39E-6	7.54E-5	2.71E-7	-5.39E-4	8.52E-4
ADP-mm	kg Sb eq	1.01E-4	7.96E-8	1.97E-8	1.01E-4	1.77E-8	3.64E-7	2.05E-10	-7.53E-7	1.01E-4
ADP-f	MJ	5.29E+0	4.73E-2	1.36E-3	5.34E+0	1.05E-2	1.89E-1	5.89E-4	-1.44E+0	4.09E+0
WDP	m3 depriv.	1.67E-1	1.45E-4	5.22E-5	1.67E-1	3.22E-5	4.42E-3	6.51E-6	-6.66E-2	1.05E-1
PM	disease inc.	2.08E-8	2.78E-10	9.08E-12	2.11E-8	6.18E-11	1.15E-9	4.05E-12	-6.13E-9	1.61E-8
IR	kBq U-235 eq	1.85E-2	2.07E-4	1.02E-6	1.87E-2	4.59E-5	7.51E-4	2.66E-6	-7.89E-4	1.87E-2
ETP-fw	CTUe	1.13E+1	3.84E-2	1.21E-2	1.14E+1	8.53E-3	9.19E-1	8.07E-3	-3.49E+0	8.82E+0
HTP-c	CTUh	1.55E-9	1.37E-12	6.17E-13	1.56E-9	3.04E-13	2.05E-11	1.79E-14	-4.09E-11	1.54E-9
HTP-nc	CTUh	1.98E-8	4.57E-11	1.57E-11	1.99E-8	1.02E-11	4.91E-10	1.59E-12	1.31E-8	3.35E-8
SQP	Pt	4.28E+0	4.04E-2	2.24E-3	4.32E+0	8.99E-3	1.72E-1	1.49E-3	-3.84E+0	6.64E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.06E+0	6.78E-4	2.40E-2	1.09E+0	1.51E-4	1.30E-2	2.02E-5	-6.04E-1	4.98E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.06E+0	6.78E-4	2.40E-2	1.09E+0	1.51E-4	1.30E-2	2.02E-5	-6.04E-1	4.98E-1
PENRE	MJ	5.64E+0	5.02E-2	1.44E-3	5.69E+0	1.12E-2	2.00E-1	6.26E-4	-1.54E+0	4.36E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.64E+0	5.02E-2	1.44E-3	5.69E+0	1.12E-2	2.00E-1	6.26E-4	-1.54E+0	4.36E+0
PET	MJ	6.70E+0	5.08E-2	2.55E-2	6.78E+0	1.13E-2	2.13E-1	6.46E-4	-2.14E+0	4.86E+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	4.03E-3	5.35E-6	1.46E-6	4.03E-3	1.19E-6	1.32E-4	7.09E-7	-1.01E-3	3.16E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.48E-5	1.21E-7	2.73E-13	2.49E-5	2.69E-8	4.03E-7	7.40E-10	-9.58E-6	1.57E-5
NHWD	kg	8.53E-2	2.93E-3	1.05E-6	8.82E-2	6.51E-4	9.40E-3	2.60E-3	-1.11E-2	8.97E-2
RWD	kg	1.72E-5	3.21E-7	1.10E-13	1.76E-5	7.14E-8	9.39E-7	3.80E-9	-1.46E-6	1.71E-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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