

Environmental Profile

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

Ecochain v3.5.80



Product: 3026177 - PP Bracket GY 40
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	3.14E-2	6.37E-4	1.45E-4	3.22E-2	3.16E-4	5.13E-2	1.48E-4	-2.72E-2	5.68E-2
GWP-f	kg CO2 eq	6.45E-2	6.36E-4	1.46E-4	6.53E-2	3.16E-4	1.75E-2	1.48E-4	-2.82E-2	5.50E-2
GWP-b	kg CO2 eq	-3.31E-2	3.87E-7	-1.54E-6	-3.31E-2	1.92E-7	3.38E-2	1.26E-7	1.03E-3	1.69E-3
GWP-luluc	kg CO2 eq	5.80E-5	2.25E-7	1.49E-7	5.83E-5	1.12E-7	2.10E-6	3.05E-9	-2.42E-5	3.64E-5
ODP	kg CFC11 eq	3.57E-9	1.47E-10	8.26E-12	3.73E-9	7.28E-11	3.47E-10	3.77E-12	-2.77E-9	1.38E-9
AP	mol H+ eq	3.24E-4	3.63E-6	1.47E-6	3.29E-4	1.80E-6	1.48E-5	9.21E-8	-9.68E-5	2.49E-4
EP-fw	kg P eq	2.03E-6	5.24E-9	8.24E-9	2.04E-6	2.60E-9	6.49E-8	1.32E-10	-6.70E-7	1.44E-6
EP-m	kg N eq	5.76E-5	1.30E-6	1.55E-7	5.91E-5	6.44E-7	4.58E-6	5.46E-8	-2.08E-5	4.35E-5
EP-T	mol N eq	6.59E-4	1.43E-5	1.85E-6	6.75E-4	7.09E-6	5.07E-5	3.68E-7	-2.37E-4	4.96E-4
POCP	kg NMVOC eq	2.41E-4	4.09E-6	6.28E-7	2.46E-4	2.03E-6	1.53E-5	1.38E-7	-1.01E-4	1.62E-4
ADP-mm	kg Sb eq	1.67E-6	1.65E-8	1.97E-8	1.71E-6	8.17E-9	5.54E-8	9.70E-11	-2.16E-7	1.56E-6
ADP-f	MJ	1.42E+0	9.77E-3	1.36E-3	1.43E+0	4.85E-3	3.94E-2	2.77E-4	-6.38E-1	8.39E-1
WDP	m3 depriv.	3.06E-2	3.00E-5	5.22E-5	3.07E-2	1.49E-5	6.67E-4	3.18E-6	-1.38E-2	1.76E-2
PM	disease inc.	3.74E-9	5.75E-11	9.08E-12	3.81E-9	2.85E-11	2.25E-10	1.90E-12	-1.29E-9	2.78E-9
IR	kBq U-235 eq	2.01E-3	4.27E-5	1.02E-6	2.05E-3	2.12E-5	1.31E-4	1.25E-6	-5.22E-4	1.68E-3
ETP-fw	CTUe	1.34E+0	7.93E-3	1.21E-2	1.36E+0	3.94E-3	4.95E-2	2.31E-4	-4.30E-1	9.80E-1
HTP-c	CTUh	3.33E-10	2.82E-13	6.17E-13	3.34E-10	1.40E-13	7.08E-12	8.09E-15	-1.67E-11	3.24E-10
HTP-nc	CTUh	1.36E-9	9.46E-12	1.57E-11	1.39E-9	4.69E-12	7.72E-11	1.57E-13	5.58E-10	2.03E-9
SQP	Pt	3.03E+0	8.36E-3	2.24E-3	3.04E+0	4.15E-3	3.29E-2	7.02E-4	-2.55E+0	5.26E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.37E-1	1.40E-4	2.40E-2	5.61E-1	6.96E-5	1.93E-3	9.71E-6	-3.91E-1	1.72E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.37E-1	1.40E-4	2.40E-2	5.61E-1	6.96E-5	1.93E-3	9.71E-6	-3.91E-1	1.72E-1
PENRE	MJ	1.52E+0	1.04E-2	1.44E-3	1.53E+0	5.15E-3	4.19E-2	2.94E-4	-6.87E-1	8.94E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.52E+0	1.04E-2	1.44E-3	1.53E+0	5.15E-3	4.19E-2	2.94E-4	-6.87E-1	8.94E-1
PET	MJ	2.06E+0	1.05E-2	2.55E-2	2.09E+0	5.22E-3	4.39E-2	3.03E-4	-1.08E+0	1.07E+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	6.68E-4	1.11E-6	1.46E-6	6.71E-4	5.49E-7	2.19E-5	3.33E-7	-2.33E-4	4.61E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.00E-6	2.50E-8	2.73E-13	1.03E-6	1.24E-8	7.37E-8	3.49E-10	-9.07E-7	2.05E-7
NHWD	kg	2.59E-2	6.06E-4	1.05E-6	2.65E-2	3.01E-4	2.33E-3	1.20E-3	-2.28E-3	2.80E-2
RWD	kg	1.92E-6	6.64E-8	1.10E-13	1.99E-6	3.30E-8	1.71E-7	1.78E-9	-5.79E-7	1.61E-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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