

Environmental Profile

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

Ecochain v3.5.80



Product: 3026070 - PP Bracket GY 160 BC
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	2.51E-1	3.33E-3	1.45E-4	2.54E-1	3.14E-3	1.88E-1	1.48E-3	-1.65E-1	2.82E-1
GWP-f	kg CO2 eq	3.16E-1	3.32E-3	1.46E-4	3.19E-1	3.13E-3	1.16E-1	1.48E-3	-1.78E-1	2.62E-1
GWP-b	kg CO2 eq	-6.53E-2	2.02E-6	-1.54E-6	-6.53E-2	1.90E-6	7.25E-2	1.28E-6	1.31E-2	2.03E-2
GWP-luluc	kg CO2 eq	2.12E-4	1.18E-6	1.49E-7	2.14E-4	1.11E-6	1.84E-5	2.53E-8	-1.55E-4	7.82E-5
ODP	kg CFC11 eq	1.05E-8	7.66E-10	8.26E-12	1.13E-8	7.22E-10	2.63E-9	3.70E-11	-9.98E-9	4.66E-9
AP	mol H+ eq	1.26E-3	1.89E-5	1.47E-6	1.28E-3	1.78E-5	1.10E-4	8.84E-7	-5.53E-4	8.58E-4
EP-fw	kg P eq	6.63E-6	2.73E-8	8.24E-9	6.67E-6	2.58E-8	5.37E-7	1.16E-9	-3.36E-6	3.87E-6
EP-m	kg N eq	2.26E-4	6.77E-6	1.55E-7	2.33E-4	6.38E-6	3.32E-5	5.74E-7	-1.08E-4	1.65E-4
EP-T	mol N eq	2.51E-3	7.46E-5	1.85E-6	2.59E-3	7.04E-5	3.66E-4	3.59E-6	-1.22E-3	1.81E-3
POCP	kg NMVOC eq	1.05E-3	2.13E-5	6.28E-7	1.07E-3	2.01E-5	1.14E-4	1.35E-6	-5.04E-4	7.06E-4
ADP-mm	kg Sb eq	5.23E-6	8.60E-8	1.97E-8	5.33E-6	8.10E-8	4.27E-7	8.93E-10	-1.24E-6	4.60E-6
ADP-f	MJ	9.90E+0	5.10E-2	1.36E-3	9.95E+0	4.81E-2	3.29E-1	2.71E-3	-5.11E+0	5.23E+0
WDP	m3 depriv.	2.01E-1	1.57E-4	5.22E-5	2.01E-1	1.48E-4	6.20E-3	1.43E-5	-1.05E-1	1.03E-1
PM	disease inc.	1.23E-8	3.00E-10	9.08E-12	1.26E-8	2.83E-10	1.77E-9	1.86E-11	-6.05E-9	8.62E-9
IR	kBq U-235 eq	6.88E-3	2.23E-4	1.02E-6	7.10E-3	2.10E-4	1.02E-3	1.25E-5	-3.52E-3	4.84E-3
ETP-fw	CTUe	4.59E+0	4.14E-2	1.21E-2	4.64E+0	3.90E-2	3.86E-1	2.26E-3	-1.97E+0	3.10E+0
HTP-c	CTUh	2.84E-10	1.47E-12	6.17E-13	2.86E-10	1.39E-12	4.79E-11	6.66E-14	-5.81E-11	2.77E-10
HTP-nc	CTUh	3.44E-9	4.94E-11	1.57E-11	3.51E-9	4.65E-11	5.72E-10	1.46E-12	-8.10E-10	3.32E-9
SQP	Pt	6.70E+0	4.36E-2	2.24E-3	6.74E+0	4.11E-2	2.61E-1	6.94E-3	-7.26E+0	-2.05E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.33E+0	7.32E-4	2.40E-2	2.35E+0	6.90E-4	1.59E-2	1.04E-4	-1.20E+0	1.16E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.33E+0	7.32E-4	2.40E-2	2.35E+0	6.90E-4	1.59E-2	1.04E-4	-1.20E+0	1.16E+0
PENRE	MJ	1.06E+1	5.41E-2	1.44E-3	1.07E+1	5.10E-2	3.51E-1	2.87E-3	-5.51E+0	5.58E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.06E+1	5.41E-2	1.44E-3	1.07E+1	5.10E-2	3.51E-1	2.87E-3	-5.51E+0	5.58E+0
PET	MJ	1.29E+1	5.49E-2	2.55E-2	1.30E+1	5.17E-2	3.66E-1	2.97E-3	-6.71E+0	6.74E+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	3.41E-3	5.77E-6	1.46E-6	3.42E-3	5.44E-6	1.89E-4	3.33E-6	-1.82E-3	1.80E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.26E-6	1.30E-7	2.73E-13	2.39E-6	1.23E-7	5.60E-7	3.27E-9	-2.14E-6	9.35E-7
NHWD	kg	2.80E-2	3.16E-3	1.05E-6	3.11E-2	2.98E-3	1.71E-2	1.19E-2	-7.61E-3	5.55E-2
RWD	kg	6.33E-6	3.47E-7	1.10E-13	6.67E-6	3.27E-7	1.31E-6	1.77E-8	-3.38E-6	4.96E-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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