

# Environmental Profile

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

Ecochain v3.5.80



Product: 3026152 - PP Bracket GY 63  
 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

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]

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.12E-2	7.84E-4	1.45E-4	5.22E-2	5.27E-4	5.91E-2	2.47E-4	-3.73E-2	7.48E-2
GWP-f	kg CO2 eq	8.42E-2	7.84E-4	1.46E-4	8.51E-2	5.26E-4	2.49E-2	2.47E-4	-3.93E-2	7.15E-2
GWP-b	kg CO2 eq	-3.30E-2	4.76E-7	-1.54E-6	-3.30E-2	3.20E-7	3.42E-2	2.12E-7	2.05E-3	3.24E-3
GWP-luluc	kg CO2 eq	6.99E-5	2.77E-7	1.49E-7	7.03E-5	1.86E-7	3.32E-6	4.71E-9	-3.34E-5	4.04E-5
ODP	kg CFC11 eq	4.13E-9	1.81E-10	8.26E-12	4.32E-9	1.21E-10	5.18E-10	6.25E-12	-3.29E-9	1.67E-9
AP	mol H+ eq	4.01E-4	4.46E-6	1.47E-6	4.07E-4	3.00E-6	2.19E-5	1.51E-7	-1.30E-4	3.02E-4
EP-fw	kg P eq	2.42E-6	6.45E-9	8.24E-9	2.44E-6	4.33E-9	1.00E-7	2.09E-10	-8.70E-7	1.67E-6
EP-m	kg N eq	7.10E-5	1.60E-6	1.55E-7	7.27E-5	1.07E-6	6.73E-6	9.34E-8	-2.70E-5	5.37E-5
EP-T	mol N eq	8.06E-4	1.76E-5	1.85E-6	8.25E-4	1.18E-5	7.43E-5	6.09E-7	-3.06E-4	6.06E-4
POCP	kg NMVOC eq	3.04E-4	5.03E-6	6.28E-7	3.10E-4	3.38E-6	2.27E-5	2.28E-7	-1.30E-4	2.06E-4
ADP-mm	kg Sb eq	2.01E-6	2.03E-8	1.97E-8	2.05E-6	1.36E-8	8.35E-8	1.57E-10	-2.88E-7	1.86E-6
ADP-f	MJ	2.06E+0	1.20E-2	1.36E-3	2.08E+0	8.08E-3	6.11E-2	4.58E-4	-9.69E-1	1.18E+0
WDP	m3 depriv.	4.36E-2	3.69E-5	5.22E-5	4.36E-2	2.48E-5	1.08E-3	4.01E-6	-2.07E-2	2.41E-2
PM	disease inc.	4.43E-9	7.07E-11	9.08E-12	4.51E-9	4.75E-11	3.41E-10	3.15E-12	-1.62E-9	3.28E-9
IR	kBq U-235 eq	2.39E-3	5.26E-5	1.02E-6	2.45E-3	3.53E-5	1.98E-4	2.09E-6	-7.34E-4	1.95E-3
ETP-fw	CTUe	1.64E+0	9.77E-3	1.21E-2	1.66E+0	6.56E-3	7.49E-2	3.83E-4	-5.48E-1	1.20E+0
HTP-c	CTUh	3.41E-10	3.48E-13	6.17E-13	3.42E-10	2.34E-13	1.01E-11	1.25E-14	-1.90E-11	3.34E-10
HTP-nc	CTUh	1.59E-9	1.16E-11	1.57E-11	1.61E-9	7.82E-12	1.14E-10	2.55E-13	4.91E-10	2.23E-9
SQP	Pt	3.11E+0	1.03E-2	2.24E-3	3.12E+0	6.91E-3	5.00E-2	1.17E-3	-2.75E+0	4.33E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.05E-1	1.73E-4	2.40E-2	7.30E-1	1.16E-4	2.98E-3	1.68E-5	-4.29E-1	3.04E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.05E-1	1.73E-4	2.40E-2	7.30E-1	1.16E-4	2.98E-3	1.68E-5	-4.29E-1	3.04E-1
PENRE	MJ	2.21E+0	1.28E-2	1.44E-3	2.23E+0	8.58E-3	6.50E-2	4.86E-4	-1.04E+0	1.26E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.21E+0	1.28E-2	1.44E-3	2.23E+0	8.58E-3	6.50E-2	4.86E-4	-1.04E+0	1.26E+0
PET	MJ	2.92E+0	1.29E-2	2.55E-2	2.96E+0	8.70E-3	6.80E-2	5.03E-4	-1.47E+0	1.56E+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	8.81E-4	1.36E-6	1.46E-6	8.84E-4	9.14E-7	3.44E-5	5.57E-7	-3.53E-4	5.67E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.10E-6	3.08E-8	2.73E-13	1.13E-6	2.07E-8	1.10E-7	5.67E-10	-1.01E-6	2.56E-7
NHWD	kg	2.68E-2	7.46E-4	1.05E-6	2.75E-2	5.01E-4	3.43E-3	2.00E-3	-2.61E-3	3.08E-2
RWD	kg	2.26E-6	8.18E-8	1.10E-13	2.34E-6	5.50E-8	2.56E-7	2.97E-9	-7.75E-7	1.88E-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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