

# Environmental Profile

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

Ecochain v3.5.80



Product: 3072505 - KG Plug DN315 FIN  
 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	4.13E+0	7.05E-2	1.45E-4	4.20E+0	5.42E-2	2.28E+0	1.72E-2	-2.39E+0	4.16E+0
GWP-f	kg CO2 eq	4.68E+0	7.05E-2	1.46E-4	4.75E+0	5.42E-2	1.62E+0	1.72E-2	-2.52E+0	3.92E+0
GWP-b	kg CO2 eq	-5.52E-1	4.28E-5	-1.54E-6	-5.52E-1	3.29E-5	6.61E-1	2.17E-5	1.28E-1	2.37E-1
GWP-luluc	kg CO2 eq	4.99E-3	2.49E-5	1.49E-7	5.02E-3	1.92E-5	6.85E-4	4.52E-7	-2.79E-3	2.93E-3
ODP	kg CFC11 eq	2.36E-6	1.62E-8	8.26E-12	2.38E-6	1.25E-8	1.90E-7	6.42E-10	-1.19E-6	1.39E-6
AP	mol H+ eq	2.24E-2	4.01E-4	1.47E-6	2.28E-2	3.09E-4	3.23E-3	1.56E-5	-1.00E-2	1.64E-2
EP-fw	kg P eq	2.18E-4	5.80E-7	8.24E-9	2.18E-4	4.46E-7	2.30E-5	2.04E-8	-1.02E-4	1.40E-4
EP-m	kg N eq	3.98E-3	1.44E-4	1.55E-7	4.12E-3	1.10E-4	7.91E-4	9.68E-6	-1.83E-3	3.20E-3
EP-T	mol N eq	4.33E-2	1.58E-3	1.85E-6	4.48E-2	1.22E-3	8.72E-3	6.23E-5	-1.98E-2	3.51E-2
POCP	kg NMVOC eq	1.42E-2	4.52E-4	6.28E-7	1.47E-2	3.48E-4	2.61E-3	2.14E-5	-6.71E-3	1.09E-2
ADP-mm	kg Sb eq	4.26E-3	1.82E-6	1.97E-8	4.26E-3	1.40E-6	1.27E-5	1.57E-8	-4.98E-5	4.23E-3
ADP-f	MJ	1.14E+2	1.08E+0	1.36E-3	1.15E+2	8.32E-1	8.70E+0	4.69E-2	-5.98E+1	6.44E+1
WDP	m3 depriv.	7.20E+0	3.32E-3	5.22E-5	7.21E+0	2.55E-3	3.45E-1	3.05E-4	-3.57E+0	3.98E+0
PM	disease inc.	1.59E-7	6.36E-9	9.08E-12	1.65E-7	4.89E-9	3.98E-8	3.23E-10	-7.99E-8	1.30E-7
IR	kBq U-235 eq	2.53E-1	4.73E-3	1.02E-6	2.58E-1	3.64E-3	3.08E-2	2.15E-4	-1.21E-1	1.72E-1
ETP-fw	CTUe	1.35E+2	8.78E-1	1.21E-2	1.35E+2	6.76E-1	6.77E+1	7.48E-1	-4.54E+1	1.59E+2
HTP-c	CTUh	4.22E-9	3.13E-11	6.17E-13	4.25E-9	2.40E-11	9.81E-10	1.30E-12	-1.53E-9	3.73E-9
HTP-nc	CTUh	1.29E-7	1.05E-9	1.57E-11	1.30E-7	8.05E-10	2.35E-8	1.43E-10	-4.71E-8	1.07E-7
SQP	Pt	7.20E+1	9.25E-1	2.24E-3	7.29E+1	7.12E-1	5.32E+0	1.20E-1	-7.38E+1	5.21E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.74E+1	1.55E-2	2.40E-2	2.74E+1	1.19E-2	6.29E-1	1.75E-3	-1.34E+1	1.47E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.74E+1	1.55E-2	2.40E-2	2.74E+1	1.19E-2	6.29E-1	1.75E-3	-1.34E+1	1.47E+1
PENRE	MJ	1.22E+2	1.15E+0	1.44E-3	1.23E+2	8.83E-1	9.25E+0	4.98E-2	-6.44E+1	6.88E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.22E+2	1.15E+0	1.44E-3	1.23E+2	8.83E-1	9.25E+0	4.98E-2	-6.44E+1	6.88E+1
PET	MJ	1.49E+2	1.16E+0	2.55E-2	1.50E+2	8.95E-1	9.88E+0	5.15E-2	-7.78E+1	8.34E+1
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	8.26E-2	1.22E-4	1.46E-6	8.27E-2	9.41E-5	9.46E-3	5.74E-5	-4.10E-2	5.13E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.17E-4	2.77E-6	2.73E-13	6.20E-4	2.13E-6	1.42E-5	5.71E-8	-5.28E-5	5.84E-4
NHWD	kg	4.88E-1	6.70E-2	1.05E-6	5.55E-1	5.16E-2	3.19E-1	2.06E-1	-2.13E-1	9.19E-1
RWD	kg	2.23E-4	7.36E-6	1.10E-13	2.30E-4	5.66E-6	3.30E-5	3.05E-7	-1.08E-4	1.61E-4
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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