

Environmental Profile

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

Ecochain v3.5.80



Product: 3072506 - KG Plug DN400 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	7.80E+0	1.38E-1	1.45E-4	7.94E+0	1.03E-1	4.70E+0	3.28E-2	-4.61E+0	8.16E+0
GWP-f	kg CO2 eq	9.10E+0	1.38E-1	1.46E-4	9.24E+0	1.03E-1	3.15E+0	3.28E-2	-4.91E+0	7.62E+0
GWP-b	kg CO2 eq	-1.31E+0	8.38E-5	-1.54E-6	-1.31E+0	6.28E-5	1.54E+0	4.15E-5	3.05E-1	5.41E-1
GWP-luluc	kg CO2 eq	1.01E-2	4.88E-5	1.49E-7	1.01E-2	3.66E-5	1.31E-3	8.62E-7	-5.87E-3	5.58E-3
ODP	kg CFC11 eq	4.52E-6	3.18E-8	8.26E-12	4.56E-6	2.38E-8	3.64E-7	1.22E-9	-2.29E-6	2.66E-6
AP	mol H+ eq	4.37E-2	7.86E-4	1.47E-6	4.45E-2	5.89E-4	6.21E-3	2.98E-5	-1.96E-2	3.17E-2
EP-fw	kg P eq	4.23E-4	1.14E-6	8.24E-9	4.25E-4	8.51E-7	4.39E-5	3.90E-8	-2.01E-4	2.68E-4
EP-m	kg N eq	7.82E-3	2.81E-4	1.55E-7	8.10E-3	2.11E-4	1.53E-3	1.85E-5	-3.62E-3	6.24E-3
EP-T	mol N eq	8.51E-2	3.10E-3	1.85E-6	8.82E-2	2.32E-3	1.69E-2	1.19E-4	-3.93E-2	6.82E-2
POCP	kg NMVOC eq	2.79E-2	8.86E-4	6.28E-7	2.88E-2	6.64E-4	5.03E-3	4.09E-5	-1.33E-2	2.13E-2
ADP-mm	kg Sb eq	8.13E-3	3.57E-6	1.97E-8	8.14E-3	2.67E-6	2.44E-5	2.99E-8	-9.59E-5	8.07E-3
ADP-f	MJ	2.20E+2	2.12E+0	1.36E-3	2.22E+2	1.59E+0	1.67E+1	8.94E-2	-1.16E+2	1.25E+2
WDP	m3 depriv.	1.38E+1	6.50E-3	5.22E-5	1.38E+1	4.87E-3	6.59E-1	5.81E-4	-6.92E+0	7.58E+0
PM	disease inc.	3.16E-7	1.25E-8	9.08E-12	3.28E-7	9.33E-9	7.66E-8	6.16E-10	-1.63E-7	2.52E-7
IR	kBq U-235 eq	4.90E-1	9.26E-3	1.02E-6	4.99E-1	6.94E-3	5.92E-2	4.11E-4	-2.36E-1	3.30E-1
ETP-fw	CTUe	2.66E+2	1.72E+0	1.21E-2	2.68E+2	1.29E+0	1.29E+2	1.43E+0	-9.23E+1	3.08E+2
HTP-c	CTUh	8.23E-9	6.12E-11	6.17E-13	8.29E-9	4.59E-11	1.89E-9	2.47E-12	-3.04E-9	7.19E-9
HTP-nc	CTUh	2.49E-7	2.05E-9	1.57E-11	2.51E-7	1.54E-9	4.50E-8	2.74E-10	-9.19E-8	2.06E-7
SQP	Pt	1.62E+2	1.81E+0	2.24E-3	1.63E+2	1.36E+0	1.02E+1	2.29E-1	-1.70E+2	5.34E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.59E+1	3.04E-2	2.40E-2	5.60E+1	2.28E-2	1.20E+0	3.34E-3	-3.03E+1	2.70E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.59E+1	3.04E-2	2.40E-2	5.60E+1	2.28E-2	1.20E+0	3.34E-3	-3.03E+1	2.70E+1
PENRE	MJ	2.36E+2	2.25E+0	1.44E-3	2.38E+2	1.68E+0	1.77E+1	9.49E-2	-1.25E+2	1.33E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.36E+2	2.25E+0	1.44E-3	2.38E+2	1.68E+0	1.77E+1	9.49E-2	-1.25E+2	1.33E+2
PET	MJ	2.92E+2	2.28E+0	2.55E-2	2.94E+2	1.71E+0	1.89E+1	9.83E-2	-1.55E+2	1.60E+2
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	1.60E-1	2.40E-4	1.46E-6	1.60E-1	1.80E-4	1.81E-2	1.10E-4	-8.09E-2	9.75E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.18E-3	5.42E-6	2.73E-13	1.19E-3	4.06E-6	2.74E-5	1.09E-7	-1.03E-4	1.11E-3
NHWD	kg	9.64E-1	1.31E-1	1.05E-6	1.10E+0	9.84E-2	6.15E-1	3.93E-1	-4.21E-1	1.78E+0
RWD	kg	4.32E-4	1.44E-5	1.10E-13	4.46E-4	1.08E-5	6.35E-5	5.82E-7	-2.13E-4	3.08E-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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