

Environmental Profile

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

Ecochain v3.5.80



Product: 3072496 - KG Bend 45° DN250 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	4.53E+0	2.94E-1	1.45E-4	4.82E+0	7.33E-2	3.70E+0	2.28E-2	-3.23E+0	5.39E+0
GWP-f	kg CO2 eq	7.88E+0	2.94E-1	1.46E-4	8.17E+0	7.32E-2	2.15E+0	2.28E-2	-3.54E+0	6.89E+0
GWP-b	kg CO2 eq	-3.38E+0	1.79E-4	-1.54E-6	-3.38E+0	4.45E-5	1.54E+0	2.96E-5	3.14E-1	-1.53E+0
GWP-luluc	kg CO2 eq	3.38E-2	1.04E-4	1.49E-7	3.39E-2	2.59E-5	9.55E-4	5.75E-7	-5.03E-3	2.99E-2
ODP	kg CFC11 eq	3.45E-6	6.78E-8	8.26E-12	3.52E-6	1.69E-8	2.69E-7	8.65E-10	-1.63E-6	2.18E-6
AP	mol H+ eq	3.90E-2	1.68E-3	1.47E-6	4.06E-2	4.17E-4	4.54E-3	2.09E-5	-1.47E-2	3.09E-2
EP-fw	kg P eq	3.53E-4	2.42E-6	8.24E-9	3.55E-4	6.03E-7	3.21E-5	2.65E-8	-1.53E-4	2.35E-4
EP-m	kg N eq	7.52E-3	6.00E-4	1.55E-7	8.12E-3	1.49E-4	1.12E-3	1.33E-5	-2.76E-3	6.64E-3
EP-T	mol N eq	8.24E-2	6.61E-3	1.85E-6	8.90E-2	1.64E-3	1.23E-2	8.37E-5	-3.01E-2	7.30E-2
POCP	kg NMVOC eq	2.76E-2	1.89E-3	6.28E-7	2.95E-2	4.70E-4	3.68E-3	2.87E-5	-1.01E-2	2.36E-2
ADP-mm	kg Sb eq	6.01E-3	7.61E-6	1.97E-8	6.02E-3	1.89E-6	1.79E-5	2.07E-8	-6.95E-5	5.97E-3
ADP-f	MJ	1.83E+2	4.52E+0	1.36E-3	1.88E+2	1.12E+0	1.21E+1	6.31E-2	-8.31E+1	1.18E+2
WDP	m3 depriv.	1.24E+1	1.39E-2	5.22E-5	1.24E+1	3.45E-3	4.83E-1	2.88E-4	-5.05E+0	7.88E+0
PM	disease inc.	3.58E-7	2.66E-8	9.08E-12	3.84E-7	6.61E-9	5.57E-8	4.34E-10	-1.32E-7	3.15E-7
IR	kBq U-235 eq	4.38E-1	1.97E-2	1.02E-6	4.58E-1	4.91E-3	4.33E-2	2.92E-4	-1.76E-1	3.31E-1
ETP-fw	CTUe	2.28E+2	3.67E+0	1.21E-2	2.32E+2	9.13E-1	9.58E+1	1.06E+0	-7.43E+1	2.55E+2
HTP-c	CTUh	8.44E-9	1.30E-10	6.17E-13	8.57E-9	3.25E-11	1.29E-9	1.66E-12	-2.36E-9	7.54E-9
HTP-nc	CTUh	2.06E-7	4.37E-9	1.57E-11	2.11E-7	1.09E-9	3.27E-8	2.01E-10	-6.82E-8	1.76E-7
SQP	Pt	3.32E+2	3.86E+0	2.24E-3	3.36E+2	9.62E-1	7.35E+0	1.62E-1	-1.66E+2	1.78E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.74E+1	6.48E-2	2.40E-2	6.75E+1	1.61E-2	8.79E-1	2.42E-3	-2.89E+1	3.95E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.74E+1	6.48E-2	2.40E-2	6.75E+1	1.61E-2	8.79E-1	2.42E-3	-2.89E+1	3.95E+1
PENRE	MJ	1.96E+2	4.79E+0	1.44E-3	2.01E+2	1.19E+0	1.29E+1	6.69E-2	-8.94E+1	1.26E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.96E+2	4.79E+0	1.44E-3	2.01E+2	1.19E+0	1.29E+1	6.69E-2	-8.94E+1	1.26E+2
PET	MJ	2.64E+2	4.86E+0	2.55E-2	2.69E+2	1.21E+0	1.38E+1	6.93E-2	-1.18E+2	1.65E+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	1.79E-1	5.11E-4	1.46E-6	1.79E-1	1.27E-4	1.33E-2	7.78E-5	-6.13E-2	1.31E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.88E-4	1.15E-5	2.73E-13	8.99E-4	2.87E-6	1.99E-5	7.58E-8	-7.59E-5	8.46E-4
NHWD	kg	1.08E+0	2.80E-1	1.05E-6	1.36E+0	6.97E-2	4.39E-1	2.78E-1	-3.22E-1	1.82E+0
RWD	kg	4.23E-4	3.07E-5	1.10E-13	4.53E-4	7.64E-6	4.64E-5	4.12E-7	-1.59E-4	3.49E-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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