

# Environmental Profile

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

Ecochain v3.5.80



Product: 3072495 - KG Bend 30° 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	3.73E+0	2.45E-1	1.45E-4	3.97E+0	6.14E-2	2.96E+0	1.91E-2	-2.69E+0	4.32E+0
GWP-f	kg CO2 eq	6.67E+0	2.45E-1	1.46E-4	6.92E+0	6.13E-2	1.79E+0	1.91E-2	-2.92E+0	5.86E+0
GWP-b	kg CO2 eq	-2.98E+0	1.49E-4	-1.54E-6	-2.98E+0	3.72E-5	1.17E+0	2.48E-5	2.33E-1	-1.57E+0
GWP-luluc	kg CO2 eq	2.83E-2	8.66E-5	1.49E-7	2.84E-2	2.17E-5	7.99E-4	4.82E-7	-3.96E-3	2.53E-2
ODP	kg CFC11 eq	2.91E-6	5.64E-8	8.26E-12	2.96E-6	1.41E-8	2.25E-7	7.24E-10	-1.36E-6	1.85E-6
AP	mol H+ eq	3.31E-2	1.39E-3	1.47E-6	3.45E-2	3.49E-4	3.79E-3	1.75E-5	-1.21E-2	2.66E-2
EP-fw	kg P eq	2.98E-4	2.01E-6	8.24E-9	3.00E-4	5.05E-7	2.68E-5	2.22E-8	-1.25E-4	2.02E-4
EP-m	kg N eq	6.37E-3	4.99E-4	1.55E-7	6.87E-3	1.25E-4	9.30E-4	1.11E-5	-2.25E-3	5.68E-3
EP-T	mol N eq	6.99E-2	5.50E-3	1.85E-6	7.54E-2	1.38E-3	1.02E-2	7.01E-5	-2.45E-2	6.26E-2
POCP	kg NMVOC eq	2.36E-2	1.57E-3	6.28E-7	2.51E-2	3.94E-4	3.05E-3	2.40E-5	-8.23E-3	2.04E-2
ADP-mm	kg Sb eq	5.06E-3	6.33E-6	1.97E-8	5.06E-3	1.59E-6	1.49E-5	1.73E-8	-5.78E-5	5.02E-3
ADP-f	MJ	1.55E+2	3.76E+0	1.36E-3	1.59E+2	9.41E-1	1.01E+1	5.28E-2	-6.89E+1	1.01E+2
WDP	m3 depriv.	1.04E+1	1.15E-2	5.22E-5	1.05E+1	2.89E-3	4.04E-1	2.41E-4	-4.18E+0	6.68E+0
PM	disease inc.	3.06E-7	2.21E-8	9.08E-12	3.29E-7	5.54E-9	4.64E-8	3.64E-10	-1.06E-7	2.75E-7
IR	kBq U-235 eq	3.74E-1	1.64E-2	1.02E-6	3.90E-1	4.12E-3	3.61E-2	2.45E-4	-1.44E-1	2.86E-1
ETP-fw	CTUe	1.90E+2	3.05E+0	1.21E-2	1.93E+2	7.64E-1	8.01E+1	8.85E-1	-5.95E+1	2.15E+2
HTP-c	CTUh	7.30E-9	1.09E-10	6.17E-13	7.41E-9	2.72E-11	1.07E-9	1.39E-12	-1.92E-9	6.60E-9
HTP-nc	CTUh	1.75E-7	3.64E-9	1.57E-11	1.79E-7	9.11E-10	2.73E-8	1.68E-10	-5.62E-8	1.51E-7
SQP	Pt	2.89E+2	3.21E+0	2.24E-3	2.93E+2	8.05E-1	6.13E+0	1.36E-1	-1.27E+2	1.73E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.80E+1	5.39E-2	2.40E-2	5.81E+1	1.35E-2	7.35E-1	2.03E-3	-2.21E+1	3.67E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.80E+1	5.39E-2	2.40E-2	5.81E+1	1.35E-2	7.35E-1	2.03E-3	-2.21E+1	3.67E+1
PENRE	MJ	1.66E+2	3.99E+0	1.44E-3	1.70E+2	1.00E+0	1.08E+1	5.60E-2	-7.42E+1	1.08E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.66E+2	3.99E+0	1.44E-3	1.70E+2	1.00E+0	1.08E+1	5.60E-2	-7.42E+1	1.08E+2
PET	MJ	2.24E+2	4.04E+0	2.55E-2	2.28E+2	1.01E+0	1.15E+1	5.81E-2	-9.63E+1	1.45E+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	1.50E-1	4.25E-4	1.46E-6	1.51E-1	1.07E-4	1.11E-2	6.52E-5	-5.01E-2	1.12E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.46E-4	9.61E-6	2.73E-13	7.56E-4	2.41E-6	1.66E-5	6.35E-8	-6.25E-5	7.13E-4
NHWD	kg	9.22E-1	2.33E-1	1.05E-6	1.15E+0	5.84E-2	3.65E-1	2.33E-1	-2.63E-1	1.55E+0
RWD	kg	3.62E-4	2.56E-5	1.10E-13	3.88E-4	6.40E-6	3.86E-5	3.45E-7	-1.31E-4	3.03E-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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