Environmental Profile

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

Ecochain v3.5.80

Product:	3003256 - PVC Cap GY 32 SP
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]

Statement of Confidentiality

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.37E-2	5.73E-4	1.45E-4	3.44E-2	5.76E-4	6.11E-2	1.90E-4	-3.46E-2	6.16E-2
GWP-f	kg CO2 eq	6.66E-2	5.72E-4	1.46E-4	6.74E-2	5.75E-4	2.68E-2	1.90E-4	-3.67E-2	5.83E-2
GWP-b	kg CO2 eq	-3.30E-2	3.47E-7	-1.54E-6	-3.30E-2	3.49E-7	3.43E-2	2.27E-7	2.08E-3	3.34E-3
GWP-luluc	kg CO2 eq	8.10E-5	2.02E-7	1.49E-7	8.13E-5	2.04E-7	7.09E-6	5.31E-9	-4.75E-5	4.11E-5
ODP	kg CFC11 eq	2.44E-8	1.32E-10	8.26E-12	2.45E-8	1.33E-10	1.94E-9	6.84E-12	-1.37E-8	1.29E-8
AP	mol H+ eq	3.30E-4	3.26E-6	1.47E-6	3.34E-4	3.28E-6	3.60E-5	1.69E-7	-1.39E-4	2.35E-4
EP-fw	kg P eq	2.90E-6	4.71E-9	8.24E-9	2.91E-6	4.73E-9	2.37E-7	2.33E-10	-1.33E-6	1.82E-6
EP-m	kg N eq	6.12E-5	1.17E-6	1.55E-7	6.25E-5	1.17E-6	9.37E-6	9.95E-8	-2.83E-5	4.48E-5
EP-T	mol N eq	6.78E-4	1.29E-5	1.85E-6	6.93E-4	1.29E-5	1.03E-4	6.67E-7	-3.13E-4	4.97E-4
POCP	kg NMVOC eq	2.33E-4	3.67E-6	6.28E-7	2.37E-4	3.69E-6	3.07E-5	2.31E-7	-1.08E-4	1.64E-4
ADP-mm	kg Sb eq	4.99E-5	1.48E-8	1.97E-8	4.99E-5	1.49E-8	1.37E-7	1.73E-10	-5.98E-7	4.94E-5
ADP-f	MJ	1.55E+0	8.78E-3	1.36E-3	1.56E+0	8.83E-3	9.43E-2	5.02E-4	-8.05E-1	8.55E-1
WDP	m3 depriv.	8.29E-2	2.70E-5	5.22E-5	8.30E-2	2.71E-5	3.48E-3	5.03E-6	-4.05E-2	4.60E-2
PM	disease inc.	2.86E-9	5.16E-11	9.08E-12	2.92E-9	5.19E-11	4.50E-10	3.46E-12	-1.43E-9	1.99E-9
IR	kBq U-235 eq	3.18E-3	3.84E-5	1.02E-6	3.22E-3	3.86E-5	3.35E-4	2.27E-6	-1.53E-3	2.07E-3
ETP-fw	CTUe	1.83E+0	7.13E-3	1.21E-2	1.85E+0	7.17E-3	6.68E-1	7.28E-3	-6.58E-1	1.88E+0
HTP-c	CTUh	6.43E-11	2.54E-13	6.17E-13	6.52E-11	2.55E-13	1.30E-11	1.51E-14	-2.68E-11	5.17E-11
HTP-nc	CTUh	1.59E-9	8.50E-12	1.57E-11	1.61E-9	8.55E-12	2.54E-10	1.42E-12	-5.53E-10	1.32E-9
SQP	Pt	3.09E+0	7.51E-3	2.24E-3	3.10E+0	7.55E-3	5.94E-2	1.28E-3	-2.81E+0	3.59E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.44E-1	1.26E-4	2.40E-2	5.68E-1	1.27E-4	6.51E-3	1.78E-5	-4.49E-1	1.26E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.44E-1	1.26E-4	2.40E-2	5.68E-1	1.27E-4	6.51E-3	1.78E-5	-4.49E-1	1.26E-1
PENRE	MJ	1.66E+0	9.32E-3	1.44E-3	1.67E+0	9.37E-3	1.00E-1	5.32E-4	-8.69E-1	9.10E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.66E+0	9.32E-3	1.44E-3	1.67E+0	9.37E-3	1.00E-1	5.32E-4	-8.69E-1	9.10E-1
PET	MJ	2.20E+0	9.45E-3	2.55E-2	2.24E+0	9.50E-3	1.07E-1	5.50E-4	-1.32E+0	1.04E+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	1.13E-3	9.94E-7	1.46E-6	1.13E-3	9.99E-7	9.79E-5	6.06E-7	-5.03E-4	7.26E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.37E-6	2.25E-8	2.73E-13	7.40E-6	2.26E-8	1.60E-7	6.26E-10	-8.58E-7	6.72E-6
NHWD	kg	7.89E-3	5.44E-4	1.05E-6	8.44E-3	5.47E-4	4.01E-3	2.19E-3	-3.43E-3	1.17E-2
RWD	kg	2.88E-6	5.97E-8	1.10E-13	2.93E-6	6.00E-8	3.69E-7	3.24E-9	-1.44E-6	1.93E-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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