

Environmental Profile

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

Ecochain v3.5.64



Product: 3018706 - End Cap Protection BL 63
Unit: 1 piece
Manufacturer: Wavin - IT - SM Maddalena

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 24-11-2022
End of validity: 24-11-2027
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 - IT - SM Maddalena (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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					D Reuse- Recovery- Recycling- potential											

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.63E-2	6.07E-4	2.40E-3	2.93E-2	4.48E-4	2.94E-2	2.03E-4	-1.75E-2	4.19E-2
GWP-f	kg CO2 eq	4.08E-2	6.06E-4	2.05E-3	4.35E-2	4.47E-4	1.29E-2	2.03E-4	-2.14E-2	3.56E-2
GWP-b	kg CO2 eq	-1.46E-2	3.68E-7	1.74E-4	-1.44E-2	2.72E-7	1.65E-2	1.48E-7	4.02E-3	6.13E-3
GWP-luluc	kg CO2 eq	6.32E-5	2.15E-7	1.73E-4	2.37E-4	1.58E-7	2.66E-6	8.22E-9	-3.94E-5	2.00E-4
ODP	kg CFC11 eq	4.86E-9	1.40E-10	2.06E-10	5.21E-9	1.03E-10	4.00E-10	5.57E-12	-9.39E-10	4.78E-9
AP	mol H+ eq	3.13E-4	3.45E-6	8.29E-6	3.25E-4	2.55E-6	1.59E-5	1.54E-7	-8.80E-5	2.55E-4
EP-fw	kg P eq	1.59E-6	4.99E-9	3.19E-8	1.63E-6	3.68E-9	7.79E-8	3.11E-10	-6.70E-7	1.04E-6
EP-m	kg N eq	4.52E-5	1.24E-6	1.40E-6	4.78E-5	9.12E-7	4.76E-6	5.18E-8	-1.75E-5	3.61E-5
EP-T	mol N eq	6.00E-4	1.36E-5	1.57E-5	6.30E-4	1.01E-5	5.22E-5	5.72E-7	-1.98E-4	4.94E-4
POCP	kg NMVOC eq	1.40E-4	3.89E-6	4.89E-6	1.49E-4	2.87E-6	1.63E-5	2.08E-7	-7.74E-5	9.09E-5
ADP-mm	kg Sb eq	4.85E-6	1.57E-8	5.00E-8	4.91E-6	1.16E-8	6.49E-8	1.92E-10	-1.97E-7	4.79E-6
ADP-f	MJ	4.57E-1	9.31E-3	2.70E-2	4.93E-1	6.87E-3	4.87E-2	4.23E-4	-6.68E-1	-1.19E-1
WDP	m3 depriv.	3.09E-2	2.86E-5	9.57E-3	4.05E-2	2.11E-5	8.42E-4	1.82E-5	-1.76E-2	2.38E-2
PM	disease inc.	2.82E-9	5.47E-11	8.30E-11	2.95E-9	4.04E-11	2.60E-10	2.93E-12	-1.13E-9	2.13E-9
IR	kBq U-235 eq	1.38E-3	4.07E-5	2.52E-5	1.44E-3	3.00E-5	1.53E-4	1.67E-6	-6.35E-4	9.95E-4
ETP-fw	CTUe	1.61E+0	7.56E-3	4.27E-2	1.66E+0	5.58E-3	5.75E-2	3.51E-4	-4.43E-1	1.28E+0
HTP-c	CTUh	4.11E-11	2.69E-13	2.27E-12	4.36E-11	1.98E-13	1.59E-11	2.23E-14	-1.09E-11	4.88E-11
HTP-nc	CTUh	9.17E-10	9.01E-12	4.72E-11	9.73E-10	6.65E-12	1.05E-10	3.00E-13	-2.20E-10	8.64E-10
SQP	Pt	1.57E+0	7.96E-3	4.93E-3	1.58E+0	5.88E-3	3.79E-2	1.01E-3	-1.78E+0	-1.59E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.40E-1	1.34E-4	9.36E-2	3.34E-1	9.85E-5	2.29E-3	7.34E-6	-2.96E-1	4.05E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.40E-1	1.34E-4	9.36E-2	3.34E-1	9.85E-5	2.29E-3	7.34E-6	-2.96E-1	4.05E-2
PENRE	MJ	4.90E-1	9.88E-3	2.95E-2	5.29E-1	7.29E-3	5.19E-2	4.50E-4	-7.17E-1	-1.28E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.90E-1	9.88E-3	2.95E-2	5.29E-1	7.29E-3	5.19E-2	4.50E-4	-7.17E-1	-1.28E-1
PET	MJ	7.30E-1	1.00E-2	1.23E-1	8.63E-1	7.39E-3	5.42E-2	4.57E-4	-1.01E+0	-8.78E-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	7.94E-4	1.05E-6	2.27E-4	1.02E-3	7.77E-7	2.60E-5	4.44E-7	-3.36E-4	7.14E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.00E-6	2.38E-8	2.63E-8	1.05E-6	1.76E-8	9.23E-8	6.49E-10	-2.13E-7	9.51E-7
NHWD	kg	7.95E-3	5.77E-4	2.56E-4	8.78E-3	4.26E-4	2.45E-3	1.70E-3	-1.38E-3	1.20E-2
RWD	kg	1.38E-6	6.33E-8	2.80E-8	1.47E-6	4.67E-8	1.98E-7	2.54E-9	-6.03E-7	1.11E-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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