Environmental Profile

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

Ecochain v3.5.71

Product:	3043037 - OsmaS PVCU Vent Cowl WT 110
Unit:	1 piece
Manufacturer:	Wavin - UK - Chippenham - Verified

The Wavin Osma soil range offers an exceptional choice of pipe & fittings including brackets, bends, junctions, access fittings, and terminations. To connect to your soil system, we offer push-fit & solvent weld waste ranges, together with trap, overflow & condensate ranges to cover all installation needs.

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	09-02-2023
End of validity:	09-02-2028
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 - UK - Chippenham - Verified (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	6.82E-1	2.91E-2	5.56E-2	7.67E-1	9.09E-3	2.49E-1	2.85E-3	-3.80E-1	6.48E-1
GWP-f	kg CO2 eq	6.76E-1	2.91E-2	5.38E-2	7.59E-1	9.08E-3	2.49E-1	2.85E-3	-3.77E-1	6.43E-1
GWP-b	kg CO2 eq	5.89E-3	-6.15E-6	1.77E-3	7.65E-3	5.51E-6	-2.49E-4	3.57E-6	-2.66E-3	4.75E-3
GWP-luluc	kg CO2 eq	5.66E-4	1.91E-5	3.96E-5	6.24E-4	3.21E-6	1.11E-4	7.66E-8	-2.46E-4	4.93E-4
ODP	kg CFC11 eq	3.73E-7	5.93E-9	5.45E-9	3.84E-7	2.09E-9	3.04E-8	1.07E-10	-1.91E-7	2.25E-7
AP	mol H+ eq	3.16E-3	8.68E-4	2.76E-4	4.31E-3	5.17E-5	5.12E-4	2.60E-6	-1.44E-3	3.44E-3
EP-fw	kg P eq	3.08E-5	1.31E-7	7.27E-7	3.17E-5	7.47E-8	3.71E-6	3.44E-9	-1.40E-5	2.14E-5
EP-m	kg N eq	5.31E-4	2.15E-4	5.94E-5	8.05E-4	1.85E-5	1.24E-4	1.59E-6	-2.48E-4	7.01E-4
EP-T	mol N eq	5.81E-3	2.39E-3	6.35E-4	8.84E-3	2.04E-4	1.36E-3	1.04E-5	-2.64E-3	7.77E-3
POCP	kg NMVOC eq	1.96E-3	6.21E-4	3.00E-4	2.88E-3	5.83E-5	4.08E-4	3.57E-6	-9.17E-4	2.43E-3
ADP-mm	kg Sb eq	4.04E-4	2.71E-7	1.14E-6	4.05E-4	2.35E-7	2.02E-6	2.62E-9	-7.78E-6	4.00E-4
ADP-f	MJ	1.71E+1	3.80E-1	5.93E-1	1.81E+1	1.39E-1	1.40E+0	7.81E-3	-9.19E+0	1.05E+1
WDP	m3 depriv.	1.13E+0	6.27E-4	1.92E-2	1.15E+0	4.28E-4	5.59E-2	5.66E-5	-5.49E-1	6.60E-1
PM	disease inc.	2.06E-8	1.07E-9	1.84E-9	2.35E-8	8.20E-10	6.34E-9	5.37E-11	-9.10E-9	2.16E-8
IR	kBq U-235 eq	3.73E-2	1.63E-3	1.62E-3	4.05E-2	6.09E-4	4.92E-3	3.57E-5	-1.77E-2	2.84E-2
ETP-fw	CTUe	1.48E+1	2.52E-1	1.41E+0	1.64E+1	1.13E-1	1.09E+1	1.21E-1	-5.28E+0	2.23E+1
HTP-c	CTUh	5.29E-10	1.61E-11	5.53E-11	6.01E-10	4.03E-12	1.59E-10	2.19E-13	-2.01E-10	5.63E-10
HTP-nc	CTUh	1.69E-8	2.16E-10	3.71E-9	2.09E-8	1.35E-10	3.78E-9	2.32E-11	-6.96E-9	1.78E-8
SQP	Pt	2.23E+0	8.38E-2	1.88E-1	2.50E+0	1.19E-1	8.64E-1	1.99E-2	-9.77E-1	2.53E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.47E-1	2.90E-3	2.75E+0	3.60E+0	2.00E-3	1.02E-1	2.86E-4	-3.98E-1	3.30E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.47E-1	2.90E-3	2.75E+0	3.60E+0	2.00E-3	1.02E-1	2.86E-4	-3.98E-1	3.30E+0
PENRE	MJ	1.84E+1	4.03E-1	6.30E-1	1.94E+1	1.48E-1	1.49E+0	8.29E-3	-9.90E+0	1.12E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.84E+1	4.03E-1	6.30E-1	1.94E+1	1.48E-1	1.49E+0	8.29E-3	-9.90E+0	1.12E+1
PET	MJ	1.92E+1	4.06E-1	3.38E+0	2.30E+1	1.50E-1	1.59E+0	8.57E-3	-1.03E+1	1.45E+1
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	1.24E-2	2.25E-5	5.39E-4	1.30E-2	1.58E-5	1.53E-3	9.53E-6	-5.72E-3	8.83E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.23E-5	4.21E-7	6.81E-6	6.96E-5	3.56E-7	2.26E-6	9.55E-9	-7.62E-6	6.46E-5
NHWD	kg	6.70E-2	3.56E-3	1.37E-3	7.20E-2	8.64E-3	5.09E-2	3.45E-2	-2.92E-2	1.37E-1
RWD	kg	3.24E-5	2.63E-6	1.80E-6	3.68E-5	9.48E-7	5.24E-6	5.07E-8	-1.56E-5	2.75E-5
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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