Environmental Profile

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

Ecochain v3.5.71

Product:	3035787 - OsmaS PVCU Weathering Collar BK 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	3.43E-1	1.44E-2	2.45E-2	3.82E-1	4.48E-3	1.29E-1	1.40E-3	-1.91E-1	3.26E-1
GWP-f	kg CO2 eq	3.40E-1	1.44E-2	2.37E-2	3.78E-1	4.47E-3	1.30E-1	1.40E-3	-1.90E-1	3.24E-1
GWP-b	kg CO2 eq	2.68E-3	-3.00E-6	7.80E-4	3.45E-3	2.72E-6	-1.22E-4	1.75E-6	-1.31E-3	2.03E-3
GWP-luluc	kg CO2 eq	2.81E-4	9.47E-6	1.75E-5	3.08E-4	1.58E-6	5.50E-5	3.74E-8	-1.21E-4	2.43E-4
ODP	kg CFC11 eq	1.86E-7	2.94E-9	2.41E-9	1.91E-7	1.03E-9	1.50E-8	5.26E-11	-9.44E-8	1.13E-7
AP	mol H+ eq	1.58E-3	4.29E-4	1.22E-4	2.13E-3	2.55E-5	2.54E-4	1.28E-6	-7.10E-4	1.70E-3
EP-fw	kg P eq	1.53E-5	6.54E-8	3.21E-7	1.57E-5	3.68E-8	1.83E-6	1.68E-9	-6.90E-6	1.07E-5
EP-m	kg N eq	2.66E-4	1.06E-4	2.62E-5	3.99E-4	9.12E-6	6.14E-5	7.83E-7	-1.23E-4	3.47E-4
EP-T	mol N eq	2.89E-3	1.18E-3	2.81E-4	4.36E-3	1.01E-4	6.77E-4	5.10E-6	-1.31E-3	3.83E-3
POCP	kg NMVOC eq	9.93E-4	3.07E-4	1.32E-4	1.43E-3	2.87E-5	2.03E-4	1.75E-6	-4.55E-4	1.21E-3
ADP-mm	kg Sb eq	2.01E-4	1.35E-7	5.02E-7	2.02E-4	1.16E-7	1.00E-6	1.29E-9	-3.83E-6	1.99E-4
ADP-f	MJ	8.78E+0	1.88E-1	2.62E-1	9.23E+0	6.87E-2	6.93E-1	3.84E-3	-4.59E+0	5.41E+0
WDP	m3 depriv.	5.61E-1	3.12E-4	8.48E-3	5.69E-1	2.11E-4	2.76E-2	2.71E-5	-2.70E-1	3.27E-1
PM	disease inc.	1.06E-8	5.33E-10	8.14E-10	1.20E-8	4.04E-10	3.14E-9	2.64E-11	-4.49E-9	1.11E-8
IR	kBq U-235 eq	1.91E-2	8.10E-4	7.14E-4	2.06E-2	3.00E-4	2.43E-3	1.76E-5	-8.71E-3	1.47E-2
ETP-fw	CTUe	7.33E+0	1.25E-1	6.22E-1	8.08E+0	5.58E-2	5.37E+0	5.95E-2	-2.60E+0	1.10E+1
HTP-c	CTUh	2.59E-10	7.99E-12	2.44E-11	2.92E-10	1.98E-12	7.88E-11	1.07E-13	-9.91E-11	2.74E-10
HTP-nc	CTUh	8.33E-9	1.07E-10	1.64E-9	1.01E-8	6.65E-11	1.87E-9	1.14E-11	-3.43E-9	8.60E-9
SQP	Pt	1.12E+0	4.22E-2	8.32E-2	1.25E+0	5.88E-2	4.27E-1	9.81E-3	-4.82E-1	1.26E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.23E-1	1.45E-3	1.21E+0	1.64E+0	9.85E-4	5.04E-2	1.41E-4	-1.96E-1	1.49E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.23E-1	1.45E-3	1.21E+0	1.64E+0	9.85E-4	5.04E-2	1.41E-4	-1.96E-1	1.49E+0
PENRE	MJ	9.42E+0	2.00E-1	2.78E-1	9.90E+0	7.29E-2	7.38E-1	4.08E-3	-4.95E+0	5.76E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.42E+0	2.00E-1	2.78E-1	9.90E+0	7.29E-2	7.38E-1	4.08E-3	-4.95E+0	5.76E+0
PET	MJ	9.84E+0	2.01E-1	1.49E+0	1.15E+1	7.39E-2	7.88E-1	4.22E-3	-5.14E+0	7.26E+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	6.17E-3	1.12E-5	2.38E-4	6.42E-3	7.77E-6	7.54E-4	4.69E-6	-2.82E-3	4.37E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.10E-5	2.10E-7	3.01E-6	3.42E-5	1.76E-7	1.12E-6	4.69E-9	-3.83E-6	3.17E-5
NHWD	kg	3.27E-2	1.82E-3	6.04E-4	3.51E-2	4.26E-3	2.55E-2	1.70E-2	-1.44E-2	6.74E-2
RWD	kg	1.71E-5	1.31E-6	7.96E-7	1.92E-5	4.67E-7	2.59E-6	2.50E-8	-7.69E-6	1.46E-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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