Environmental Profile

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

Ecochain v3.5.71

Product:	3032103 - OsmaS PVCU Access Plug BK 110 P/E
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	6.64E-1	2.76E-2	7.77E-2	7.69E-1	8.67E-3	2.57E-1	2.77E-3	-3.67E-1	6.70E-1
GWP-f	kg CO2 eq	6.58E-1	2.76E-2	7.61E-2	7.62E-1	8.66E-3	2.57E-1	2.77E-3	-3.64E-1	6.66E-1
GWP-b	kg CO2 eq	5.14E-3	-5.69E-6	1.56E-3	6.69E-3	5.26E-6	-2.34E-4	3.45E-6	-2.49E-3	3.97E-3
GWP-luluc	kg CO2 eq	5.46E-4	1.81E-5	7.03E-5	6.34E-4	3.07E-6	1.05E-4	7.37E-8	-2.33E-4	5.10E-4
ODP	kg CFC11 eq	3.61E-7	5.63E-9	6.25E-9	3.72E-7	2.00E-9	2.87E-8	1.03E-10	-1.81E-7	2.22E-7
AP	mol H+ eq	3.08E-3	8.20E-4	4.24E-4	4.33E-3	4.93E-5	4.87E-4	2.51E-6	-1.36E-3	3.50E-3
EP-fw	kg P eq	2.96E-5	1.25E-7	1.08E-6	3.08E-5	7.13E-8	3.51E-6	3.31E-9	-1.32E-5	2.12E-5
EP-m	kg N eq	5.18E-4	2.03E-4	7.91E-5	8.01E-4	1.77E-5	1.18E-4	1.61E-6	-2.36E-4	7.02E-4
EP-T	mol N eq	5.65E-3	2.26E-3	8.71E-4	8.78E-3	1.95E-4	1.30E-3	1.00E-5	-2.51E-3	7.77E-3
POCP	kg NMVOC eq	1.95E-3	5.87E-4	3.64E-4	2.90E-3	5.56E-5	3.88E-4	3.45E-6	-8.73E-4	2.47E-3
ADP-mm	kg Sb eq	4.10E-4	2.60E-7	2.03E-6	4.12E-4	2.24E-7	1.91E-6	2.53E-9	-7.61E-6	4.06E-4
ADP-f	MJ	1.70E+1	3.61E-1	8.42E-1	1.82E+1	1.33E-1	1.33E+0	7.53E-3	-8.81E+0	1.09E+1
WDP	m3 depriv.	1.07E+0	5.99E-4	2.44E-2	1.10E+0	4.08E-4	5.30E-2	5.35E-5	-5.17E-1	6.36E-1
PM	disease inc.	2.15E-8	1.02E-9	2.94E-9	2.54E-8	7.82E-10	6.00E-9	5.18E-11	-8.63E-9	2.36E-8
IR	kBq U-235 eq	3.82E-2	1.55E-3	1.94E-3	4.16E-2	5.81E-4	4.65E-3	3.46E-5	-1.68E-2	3.02E-2
ETP-fw	CTUe	1.45E+1	2.40E-1	2.33E+0	1.71E+1	1.08E-1	1.03E+1	1.14E-1	-4.99E+0	2.26E+1
HTP-c	CTUh	5.09E-10	1.53E-11	9.15E-11	6.15E-10	3.84E-12	1.50E-10	2.10E-13	-1.90E-10	5.79E-10
HTP-nc	CTUh	1.62E-8	2.06E-10	4.35E-9	2.08E-8	1.29E-10	3.58E-9	2.20E-11	-6.57E-9	1.79E-8
SQP	Pt	2.23E+0	8.14E-2	3.01E-1	2.61E+0	1.14E-1	8.16E-1	1.92E-2	-9.27E-1	2.63E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.19E-1	2.77E-3	5.03E+0	5.85E+0	1.91E-3	9.64E-2	2.78E-4	-3.76E-1	5.58E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.19E-1	2.77E-3	5.03E+0	5.85E+0	1.91E-3	9.64E-2	2.78E-4	-3.76E-1	5.58E+0
PENRE	MJ	1.83E+1	3.83E-1	8.94E-1	1.95E+1	1.41E-1	1.41E+0	8.00E-3	-9.49E+0	1.16E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.83E+1	3.83E-1	8.94E-1	1.95E+1	1.41E-1	1.41E+0	8.00E-3	-9.49E+0	1.16E+1
PET	MJ	1.91E+1	3.86E-1	5.92E+0	2.54E+1	1.43E-1	1.51E+0	8.27E-3	-9.87E+0	1.72E+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	1.19E-2	2.15E-5	7.29E-4	1.27E-2	1.50E-5	1.47E-3	9.21E-6	-5.41E-3	8.76E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.18E-5	4.04E-7	6.28E-6	6.85E-5	3.40E-7	2.15E-6	9.21E-9	-7.35E-6	6.36E-5
NHWD	kg	6.38E-2	3.54E-3	1.31E-3	6.86E-2	8.24E-3	4.86E-2	3.33E-2	-2.76E-2	1.31E-1
RWD	kg	3.50E-5	2.50E-6	1.66E-6	3.92E-5	9.04E-7	4.96E-6	4.90E-8	-1.48E-5	3.03E-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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