

# Environmental Profile

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

Ecochain v3.5.71



Product: 3032496 - OsmaS PP Extension WT 4"  
 Unit: 1 piece  
 Manufacturer: Wavin - UK - Chippenham - Verified

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



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.

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

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.20E-1	1.65E-2	7.92E-2	7.16E-1	5.73E-3	3.65E-1	3.08E-3	-3.17E-1	7.73E-1
GWP-f	kg CO2 eq	6.23E-1	1.65E-2	7.78E-2	7.17E-1	5.72E-3	3.65E-1	3.08E-3	-3.16E-1	7.75E-1
GWP-b	kg CO2 eq	-2.66E-3	9.39E-6	1.35E-3	-1.30E-3	3.48E-6	-1.78E-4	2.79E-6	-7.11E-4	-2.18E-3
GWP-luluc	kg CO2 eq	2.99E-4	6.06E-6	7.56E-5	3.81E-4	2.03E-6	2.83E-5	5.56E-8	-5.33E-5	3.58E-4
ODP	kg CFC11 eq	6.00E-8	3.79E-9	6.01E-9	6.98E-8	1.32E-9	4.04E-9	7.92E-11	-2.24E-8	5.28E-8
AP	mol H+ eq	3.22E-3	1.15E-4	4.43E-4	3.77E-3	3.26E-5	1.82E-4	1.92E-6	-7.22E-4	3.27E-3
EP-fw	kg P eq	1.47E-5	1.33E-7	1.11E-6	1.60E-5	4.71E-8	8.35E-7	2.54E-9	-2.95E-6	1.39E-5
EP-m	kg N eq	4.55E-4	3.85E-5	7.95E-5	5.73E-4	1.17E-5	5.59E-5	1.96E-6	-1.36E-4	5.06E-4
EP-T	mol N eq	5.09E-3	4.25E-4	8.83E-4	6.40E-3	1.29E-4	6.16E-4	7.72E-6	-1.51E-3	5.64E-3
POCP	kg NMVOC eq	2.30E-3	1.19E-4	3.56E-4	2.78E-3	3.68E-5	1.86E-4	2.87E-6	-6.61E-4	2.34E-3
ADP-mm	kg Sb eq	8.49E-5	4.13E-7	2.19E-6	8.75E-5	1.48E-7	6.27E-7	1.92E-9	-4.20E-6	8.41E-5
ADP-f	MJ	1.96E+1	2.52E-1	8.62E-1	2.07E+1	8.79E-2	5.06E-1	5.80E-3	-8.57E+0	1.28E+1
WDP	m3 depriv.	4.38E-1	7.55E-4	2.42E-2	4.63E-1	2.70E-4	1.17E-2	3.24E-5	-1.33E-1	3.42E-1
PM	disease inc.	2.89E-8	1.45E-9	3.09E-9	3.34E-8	5.17E-10	2.64E-9	3.98E-11	-5.77E-9	3.08E-8
IR	kBq U-235 eq	2.68E-2	1.10E-3	1.89E-3	2.98E-2	3.84E-4	1.52E-3	2.71E-5	-4.52E-3	2.72E-2
ETP-fw	CTUe	7.60E+0	2.03E-1	2.48E+0	1.03E+1	7.13E-2	8.73E-1	7.05E-3	-1.16E+0	1.01E+1
HTP-c	CTUh	2.97E-10	7.40E-12	9.71E-11	4.01E-10	2.54E-12	7.15E-11	1.48E-13	-4.85E-11	4.27E-10
HTP-nc	CTUh	6.09E-9	2.39E-10	4.21E-9	1.05E-8	8.50E-11	9.64E-10	3.68E-12	-1.29E-9	1.03E-8
SQP	Pt	2.02E+0	2.08E-1	3.17E-1	2.55E+0	7.52E-2	3.93E-1	1.48E-2	-2.77E-1	2.75E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.93E-1	3.53E-3	5.45E+0	5.94E+0	1.26E-3	2.49E-2	2.35E-4	-1.03E-1	5.86E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.93E-1	3.53E-3	5.45E+0	5.94E+0	1.26E-3	2.49E-2	2.35E-4	-1.03E-1	5.86E+0
PENRE	MJ	2.10E+1	2.67E-1	9.14E-1	2.22E+1	9.33E-2	5.39E-1	6.15E-3	-9.28E+0	1.35E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.10E+1	2.67E-1	9.14E-1	2.22E+1	9.33E-2	5.39E-1	6.15E-3	-9.28E+0	1.35E+1
PET	MJ	2.15E+1	2.71E-1	6.36E+0	2.81E+1	9.45E-2	5.64E-1	6.39E-3	-9.39E+0	1.94E+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	8.57E-3	2.78E-5	7.37E-4	9.34E-3	9.94E-6	5.37E-4	7.15E-6	-2.04E-3	7.85E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.49E-6	6.27E-7	5.55E-6	1.17E-5	2.25E-7	9.50E-7	7.00E-9	-3.63E-6	9.22E-6
NHWD	kg	6.08E-2	1.50E-2	1.18E-3	7.70E-2	5.45E-3	2.92E-2	2.54E-2	-6.72E-3	1.30E-1
RWD	kg	3.20E-5	1.71E-6	1.47E-6	3.52E-5	5.97E-7	1.92E-6	3.79E-8	-4.54E-6	3.32E-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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