

# Environmental Profile

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

Ecochain v3.5.71



Product: 3060277 - OsmaS PVCU Bossed Pipe BL 110x32 S/S  
 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	☑	☑	☑	☑									

## 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

This document and supporting material contain confidential and proprietary business information of Wavin - UK - Chippenham - Verified. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - UK - Chippenham - Verified.

# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.32E+0	5.38E-2	1.24E-1	1.49E+0	1.65E-2	5.23E-1	5.29E-3	-7.32E-1	1.31E+0
GWP-f	kg CO2 eq	1.31E+0	5.38E-2	1.21E-1	1.48E+0	1.65E-2	5.23E-1	5.29E-3	-7.27E-1	1.30E+0
GWP-b	kg CO2 eq	7.68E-3	-8.63E-6	2.50E-3	1.02E-2	9.99E-6	-4.57E-4	6.52E-6	-4.76E-3	4.97E-3
GWP-luluc	kg CO2 eq	1.06E-3	3.43E-5	1.11E-4	1.20E-3	5.82E-6	1.97E-4	1.38E-7	-4.40E-4	9.65E-4
ODP	kg CFC11 eq	6.66E-7	1.10E-8	9.97E-9	6.87E-7	3.79E-9	5.32E-8	1.94E-10	-3.42E-7	4.02E-7
AP	mol H+ eq	6.06E-3	1.52E-3	6.74E-4	8.26E-3	9.37E-5	9.20E-4	4.73E-6	-2.62E-3	6.65E-3
EP-fw	kg P eq	5.69E-5	2.55E-7	1.71E-6	5.89E-5	1.35E-7	6.56E-6	6.22E-9	-2.50E-5	4.06E-5
EP-m	kg N eq	1.02E-3	3.80E-4	1.26E-4	1.52E-3	3.35E-5	2.25E-4	3.07E-6	-4.58E-4	1.33E-3
EP-T	mol N eq	1.11E-2	4.22E-3	1.39E-3	1.67E-2	3.70E-4	2.48E-3	1.88E-5	-4.88E-3	1.47E-2
POCP	kg NMVOC eq	3.94E-3	1.10E-3	5.79E-4	5.62E-3	1.06E-4	7.42E-4	6.51E-6	-1.71E-3	4.77E-3
ADP-mm	kg Sb eq	6.98E-4	5.55E-7	3.22E-6	7.02E-4	4.26E-7	3.60E-6	4.75E-9	-1.40E-5	6.92E-4
ADP-f	MJ	3.44E+1	7.09E-1	1.34E+0	3.65E+1	2.53E-1	2.51E+0	1.42E-2	-1.76E+1	2.17E+1
WDP	m3 depriv.	2.05E+0	1.24E-3	3.89E-2	2.09E+0	7.75E-4	9.84E-2	9.82E-5	-9.80E-1	1.21E+0
PM	disease inc.	4.29E-8	2.15E-9	4.67E-9	4.97E-8	1.49E-9	1.14E-8	9.76E-11	-1.66E-8	4.61E-8
IR	kBq U-235 eq	7.33E-2	3.05E-3	3.09E-3	7.95E-2	1.10E-3	8.77E-3	6.51E-5	-3.17E-2	5.77E-2
ETP-fw	CTUe	2.71E+1	4.78E-1	3.70E+0	3.13E+1	2.05E-1	1.90E+1	2.10E-1	-9.44E+0	4.12E+1
HTP-c	CTUh	9.44E-10	2.95E-11	1.45E-10	1.12E-9	7.30E-12	2.89E-10	3.93E-13	-3.60E-10	1.06E-9
HTP-nc	CTUh	3.01E-8	4.23E-10	6.93E-9	3.75E-8	2.44E-10	6.73E-9	4.07E-11	-1.24E-8	3.21E-8
SQP	Pt	4.41E+0	1.89E-1	4.78E-1	5.07E+0	2.16E-1	1.56E+0	3.62E-2	-1.76E+0	5.13E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.60E+0	5.76E-3	7.97E+0	9.58E+0	3.62E-3	1.80E-1	5.26E-4	-7.12E-1	9.05E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.60E+0	5.76E-3	7.97E+0	9.58E+0	3.62E-3	1.80E-1	5.26E-4	-7.12E-1	9.05E+0
PENRE	MJ	3.69E+1	7.53E-1	1.42E+0	3.91E+1	2.68E-1	2.67E+0	1.51E-2	-1.89E+1	2.31E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.69E+1	7.53E-1	1.42E+0	3.91E+1	2.68E-1	2.67E+0	1.51E-2	-1.89E+1	2.31E+1
PET	MJ	3.85E+1	7.59E-1	9.39E+0	4.87E+1	2.72E-1	2.85E+0	1.56E-2	-1.96E+1	3.22E+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	2.34E-2	4.48E-5	1.16E-3	2.46E-2	2.86E-5	2.72E-3	1.74E-5	-1.03E-2	1.71E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.07E-4	8.60E-7	1.01E-5	1.18E-4	6.46E-7	4.07E-6	1.73E-8	-1.44E-5	1.08E-4
NHWD	kg	1.22E-1	9.35E-3	2.10E-3	1.33E-1	1.57E-2	9.49E-2	6.28E-2	-5.22E-2	2.54E-1
RWD	kg	6.75E-5	4.91E-6	2.67E-6	7.51E-5	1.72E-6	9.40E-6	9.23E-8	-2.81E-5	5.83E-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



Ecochain Technologies BV  
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands  
<https://www.ecochain.com>  
+31 20 3035 777