

Environmental Profile

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

Ecochain v3.5.71



Product: 3036985 - OsmaS PVCU D Brch 90° BK 110x110 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	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

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	1.79E+0	7.78E-2	2.15E-1	2.09E+0	2.37E-2	6.55E-1	7.70E-3	-9.98E-1	1.77E+0
GWP-f	kg CO2 eq	1.78E+0	7.78E-2	2.11E-1	2.07E+0	2.37E-2	6.55E-1	7.70E-3	-9.90E-1	1.76E+0
GWP-b	kg CO2 eq	1.29E-2	-1.03E-5	4.33E-3	1.72E-2	1.44E-5	-6.73E-4	9.39E-6	-6.81E-3	9.74E-3
GWP-luluc	kg CO2 eq	1.42E-3	4.88E-5	1.95E-4	1.67E-3	8.38E-6	2.78E-4	1.97E-7	-6.25E-4	1.33E-3
ODP	kg CFC11 eq	9.30E-7	1.60E-8	1.73E-8	9.64E-7	5.46E-9	7.45E-8	2.79E-10	-4.80E-7	5.64E-7
AP	mol H+ eq	8.25E-3	2.14E-3	1.18E-3	1.16E-2	1.35E-4	1.29E-3	6.78E-6	-3.73E-3	9.27E-3
EP-fw	kg P eq	7.78E-5	3.79E-7	2.98E-6	8.12E-5	1.95E-7	9.24E-6	8.90E-9	-3.56E-5	5.50E-5
EP-m	kg N eq	1.38E-3	5.35E-4	2.19E-4	2.13E-3	4.83E-5	3.14E-4	4.56E-6	-6.44E-4	1.85E-3
EP-T	mol N eq	1.50E-2	5.95E-3	2.41E-3	2.34E-2	5.32E-4	3.46E-3	2.71E-5	-6.86E-3	2.05E-2
POCP	kg NMVOC eq	5.32E-3	1.55E-3	1.01E-3	7.87E-3	1.52E-4	1.04E-3	9.36E-6	-2.41E-3	6.66E-3
ADP-mm	kg Sb eq	9.73E-4	8.47E-7	5.63E-6	9.80E-4	6.13E-7	5.10E-6	6.81E-9	-1.98E-5	9.66E-4
ADP-f	MJ	4.72E+1	1.03E+0	2.33E+0	5.06E+1	3.64E-1	3.56E+0	2.04E-2	-2.45E+1	3.00E+1
WDP	m3 depriv.	2.82E+0	1.87E-3	6.76E-2	2.89E+0	1.12E-3	1.38E-1	1.36E-4	-1.40E+0	1.63E+0
PM	disease inc.	5.85E-8	3.26E-9	8.14E-9	6.99E-8	2.14E-9	1.62E-8	1.40E-10	-2.39E-8	6.44E-8
IR	kBq U-235 eq	1.03E-1	4.44E-3	5.38E-3	1.13E-1	1.59E-3	1.24E-2	9.37E-5	-4.49E-2	8.21E-2
ETP-fw	CTUe	3.70E+1	7.02E-1	6.46E+0	4.41E+1	2.95E-1	2.64E+1	2.93E-1	-1.34E+1	5.78E+1
HTP-c	CTUh	1.31E-9	4.23E-11	2.53E-10	1.60E-9	1.05E-11	3.99E-10	5.61E-13	-5.10E-10	1.50E-9
HTP-nc	CTUh	4.17E-8	6.32E-10	1.20E-8	5.43E-8	3.52E-10	9.39E-9	5.70E-11	-1.76E-8	4.65E-8
SQP	Pt	5.98E+0	3.01E-1	8.34E-1	7.12E+0	3.11E-1	2.22E+0	5.21E-2	-2.48E+0	7.22E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.19E+0	8.65E-3	1.39E+1	1.61E+1	5.22E-3	2.55E-1	7.61E-4	-1.01E+0	1.54E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.19E+0	8.65E-3	1.39E+1	1.61E+1	5.22E-3	2.55E-1	7.61E-4	-1.01E+0	1.54E+1
PENRE	MJ	5.06E+1	1.10E+0	2.48E+0	5.42E+1	3.86E-1	3.79E+0	2.16E-2	-2.64E+1	3.20E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.06E+1	1.10E+0	2.48E+0	5.42E+1	3.86E-1	3.79E+0	2.16E-2	-2.64E+1	3.20E+1
PET	MJ	5.28E+1	1.10E+0	1.64E+1	7.03E+1	3.91E-1	4.04E+0	2.24E-2	-2.74E+1	4.74E+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	3.19E-2	6.74E-5	2.02E-3	3.40E-2	4.12E-5	3.80E-3	2.49E-5	-1.47E-2	2.31E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.47E-4	1.31E-6	1.75E-5	1.66E-4	9.30E-7	5.75E-6	2.48E-8	-1.94E-5	1.53E-4
NHWD	kg	1.66E-1	1.57E-2	3.65E-3	1.86E-1	2.25E-2	1.32E-1	9.01E-2	-7.42E-2	3.56E-1
RWD	kg	9.59E-5	7.14E-6	4.62E-6	1.08E-4	2.47E-6	1.33E-5	1.33E-7	-3.96E-5	8.40E-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