Environmental Profile

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

Ecochain v3.5.71

Product:	3035401 - OsmaS PVCU Boss Adaptor BK 50 SW/S
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	7.29E-2	3.08E-3	1.20E-2	8.80E-2	9.75E-4	2.70E-2	3.06E-4	-4.06E-2	7.56E-2
GWP-f	kg CO2 eq	7.23E-2	3.08E-3	1.18E-2	8.72E-2	9.74E-4	2.70E-2	3.06E-4	-4.03E-2	7.51E-2
GWP-b	kg CO2 eq	6.10E-4	-6.21E-7	1.54E-4	7.63E-4	5.91E-7	-2.69E-5	3.79E-7	-2.83E-4	4.54E-4
GWP-luluc	kg CO2 eq	5.98E-5	2.01E-6	1.23E-5	7.41E-5	3.45E-7	1.18E-5	8.36E-9	-2.62E-5	6.00E-5
ODP	kg CFC11 eq	4.01E-8	6.27E-10	8.34E-10	4.15E-8	2.24E-10	3.19E-9	1.15E-11	-2.04E-8	2.46E-8
AP	mol H+ eq	3.39E-4	9.09E-5	6.93E-5	4.99E-4	5.55E-6	5.43E-5	2.79E-7	-1.53E-4	4.06E-4
EP-fw	kg P eq	3.25E-6	1.40E-8	1.72E-7	3.43E-6	8.01E-9	3.92E-7	3.72E-10	-1.50E-6	2.34E-6
EP-m	kg N eq	5.70E-5	2.25E-5	1.18E-5	9.14E-5	1.99E-6	1.31E-5	1.68E-7	-2.65E-5	8.02E-5
EP-T	mol N eq	6.21E-4	2.51E-4	1.33E-4	1.00E-3	2.19E-5	1.45E-4	1.11E-6	-2.82E-4	8.91E-4
POCP	kg NMVOC eq	2.12E-4	6.51E-5	5.09E-5	3.28E-4	6.25E-6	4.34E-5	3.82E-7	-9.79E-5	2.80E-4
ADP-mm	kg Sb eq	4.99E-5	2.92E-8	3.57E-7	5.03E-5	2.52E-8	2.15E-7	2.83E-10	-8.29E-7	4.97E-5
ADP-f	MJ	1.88E+0	4.02E-2	1.31E-1	2.05E+0	1.50E-2	1.49E-1	8.37E-4	-9.82E-1	1.23E+0
WDP	m3 depriv.	1.18E-1	6.71E-5	3.54E-3	1.22E-1	4.59E-5	5.88E-3	6.68E-6	-5.85E-2	6.93E-2
PM	disease inc.	2.40E-9	1.15E-10	4.90E-10	3.00E-9	8.79E-11	6.75E-10	5.76E-12	-9.70E-10	2.80E-9
IR	kBq U-235 eq	4.23E-3	1.73E-4	2.69E-4	4.67E-3	6.53E-5	5.22E-4	3.82E-6	-1.89E-3	3.38E-3
ETP-fw	CTUe	1.63E+0	2.68E-2	3.96E-1	2.06E+0	1.21E-2	1.14E+0	1.26E-2	-5.63E-1	2.66E+0
HTP-c	CTUh	5.69E-11	1.70E-12	1.55E-11	7.42E-11	4.32E-13	1.74E-11	2.38E-14	-2.14E-11	7.05E-11
HTP-nc	CTUh	1.81E-9	2.30E-11	5.91E-10	2.43E-9	1.45E-11	4.00E-10	2.44E-12	-7.42E-10	2.10E-9
SQP	Pt	2.41E-1	9.21E-3	5.02E-2	3.01E-1	1.28E-2	9.23E-2	2.13E-3	-1.04E-1	3.04E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.91E-2	3.11E-4	8.93E-1	9.82E-1	2.14E-4	1.08E-2	3.02E-5	-4.24E-2	9.51E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.91E-2	3.11E-4	8.93E-1	9.82E-1	2.14E-4	1.08E-2	3.02E-5	-4.24E-2	9.51E-1
PENRE	MJ	2.02E+0	4.27E-2	1.39E-1	2.20E+0	1.59E-2	1.59E-1	8.88E-4	-1.06E+0	1.32E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.02E+0	4.27E-2	1.39E-1	2.20E+0	1.59E-2	1.59E-1	8.88E-4	-1.06E+0	1.32E+0
PET	MJ	2.10E+0	4.30E-2	1.03E+0	3.18E+0	1.61E-2	1.69E-1	9.18E-4	-1.10E+0	2.27E+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	1.30E-3	2.41E-6	1.10E-4	1.41E-3	1.69E-6	1.61E-4	1.02E-6	-6.10E-4	9.66E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.51E-6	4.53E-8	6.59E-7	8.22E-6	3.82E-8	2.41E-7	1.03E-9	-8.15E-7	7.68E-6
NHWD	kg	6.94E-3	4.06E-4	1.46E-4	7.49E-3	9.27E-4	5.46E-3	3.70E-3	-3.11E-3	1.45E-2
RWD	kg	3.92E-6	2.79E-7	1.75E-7	4.38E-6	1.02E-7	5.58E-7	5.43E-9	-1.66E-6	3.38E-6
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