Environmental Profile

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

Ecochain v3.5.71

Product:	3032098 - OsmaDrain Access Cover BN 110 P/E
Unit:	1 piece
Manufacturer:	Wavin - UK - Chippenham - Verified

Wavin OsmaDrain - the definitive & comprehensive PVC-U gravity drainage system for residential, commercial & industrial projects. The source for all types of gravity drainage, sewer installation & pressure pipe systems in any private or public development. One of the UK's most trusted & leading names in plastic drainage systems.

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	6.68E-1	2.77E-2	6.83E-2	7.64E-1	8.67E-3	2.60E-1	2.77E-3	-3.69E-1	6.66E-1
GWP-f	kg CO2 eq	6.63E-1	2.77E-2	6.66E-2	7.57E-1	8.66E-3	2.60E-1	2.77E-3	-3.66E-1	6.62E-1
GWP-b	kg CO2 eq	5.05E-3	-5.72E-6	1.63E-3	6.68E-3	5.26E-6	-2.33E-4	3.45E-6	-2.49E-3	3.96E-3
GWP-luluc	kg CO2 eq	5.53E-4	1.82E-5	5.75E-5	6.28E-4	3.07E-6	1.05E-4	7.34E-8	-2.33E-4	5.04E-4
ODP	kg CFC11 eq	3.58E-7	5.65E-9	5.89E-9	3.69E-7	2.00E-9	2.88E-8	1.03E-10	-1.81E-7	2.19E-7
AP	mol H+ eq	3.11E-3	8.23E-4	3.62E-4	4.29E-3	4.93E-5	4.88E-4	2.51E-6	-1.36E-3	3.47E-3
EP-fw	kg P eq	2.99E-5	1.26E-7	9.28E-7	3.10E-5	7.13E-8	3.52E-6	3.30E-9	-1.32E-5	2.13E-5
EP-m	kg N eq	5.22E-4	2.04E-4	7.06E-5	7.97E-4	1.77E-5	1.18E-4	1.62E-6	-2.37E-4	6.97E-4
EP-T	mol N eq	5.71E-3	2.27E-3	7.70E-4	8.75E-3	1.95E-4	1.30E-3	1.00E-5	-2.52E-3	7.74E-3
POCP	kg NMVOC eq	1.96E-3	5.89E-4	3.36E-4	2.88E-3	5.56E-5	3.89E-4	3.44E-6	-8.75E-4	2.46E-3
ADP-mm	kg Sb eq	3.87E-4	2.60E-7	1.66E-6	3.89E-4	2.24E-7	1.92E-6	2.52E-9	-7.61E-6	3.83E-4
ADP-f	MJ	1.69E+1	3.62E-1	7.36E-1	1.80E+1	1.33E-1	1.33E+0	7.53E-3	-8.84E+0	1.06E+1
WDP	m3 depriv.	1.09E+0	6.00E-4	2.22E-2	1.11E+0	4.08E-4	5.31E-2	5.25E-5	-5.17E-1	6.45E-1
PM	disease inc.	2.09E-8	1.03E-9	2.48E-9	2.44E-8	7.82E-10	6.01E-9	5.18E-11	-8.64E-9	2.27E-8
IR	kBq U-235 eq	3.72E-2	1.56E-3	1.80E-3	4.05E-2	5.81E-4	4.66E-3	3.46E-5	-1.68E-2	2.91E-2
ETP-fw	CTUe	1.44E+1	2.40E-1	1.95E+0	1.66E+1	1.08E-1	1.03E+1	1.14E-1	-5.00E+0	2.21E+1
HTP-c	CTUh	5.10E-10	1.53E-11	7.63E-11	6.01E-10	3.84E-12	1.50E-10	2.09E-13	-1.90E-10	5.65E-10
HTP-nc	CTUh	1.62E-8	2.06E-10	4.06E-9	2.05E-8	1.29E-10	3.59E-9	2.21E-11	-6.57E-9	1.77E-8
SQP	Pt	2.24E+0	8.14E-2	2.54E-1	2.58E+0	1.14E-1	8.17E-1	1.92E-2	-9.28E-1	2.60E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.28E-1	2.78E-3	4.08E+0	4.91E+0	1.91E-3	9.66E-2	2.78E-4	-3.76E-1	4.63E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.28E-1	2.78E-3	4.08E+0	4.91E+0	1.91E-3	9.66E-2	2.78E-4	-3.76E-1	4.63E+0
PENRE	MJ	1.82E+1	3.84E-1	7.82E-1	1.93E+1	1.41E-1	1.41E+0	7.99E-3	-9.53E+0	1.13E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.82E+1	3.84E-1	7.82E-1	1.93E+1	1.41E-1	1.41E+0	7.99E-3	-9.53E+0	1.13E+1
PET	MJ	1.90E+1	3.87E-1	4.86E+0	2.42E+1	1.43E-1	1.51E+0	8.27E-3	-9.91E+0	1.60E+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	1.21E-2	2.16E-5	6.48E-4	1.28E-2	1.50E-5	1.47E-3	9.21E-6	-5.41E-3	8.89E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.89E-5	4.04E-7	6.46E-6	6.57E-5	3.40E-7	2.16E-6	9.20E-9	-7.39E-6	6.08E-5
NHWD	kg	6.53E-2	3.53E-3	1.33E-3	7.01E-2	8.24E-3	4.88E-2	3.33E-2	-2.76E-2	1.33E-1
RWD	kg	3.32E-5	2.51E-6	1.71E-6	3.74E-5	9.04E-7	4.97E-6	4.90E-8	-1.48E-5	2.85E-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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