

Environmental Profile

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

Ecochain v3.5.71



Product: 3036420 - OsmaDrain Bend 15° BN 110 SN8 D/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



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.

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	7.76E-1	3.20E-2	7.10E-2	8.79E-1	9.56E-3	3.06E-1	3.19E-3	-4.30E-1	7.68E-1
GWP-f	kg CO2 eq	7.72E-1	3.20E-2	6.92E-2	8.73E-1	9.55E-3	3.07E-1	3.19E-3	-4.27E-1	7.65E-1
GWP-b	kg CO2 eq	3.31E-3	-2.30E-6	1.77E-3	5.08E-3	5.80E-6	-2.78E-4	3.80E-6	-2.73E-3	2.09E-3
GWP-luluc	kg CO2 eq	6.08E-4	1.94E-5	5.85E-5	6.86E-4	3.38E-6	1.09E-4	7.98E-8	-2.49E-4	5.49E-4
ODP	kg CFC11 eq	3.57E-7	6.67E-9	6.24E-9	3.70E-7	2.20E-9	2.87E-8	1.13E-10	-1.91E-7	2.10E-7
AP	mol H+ eq	3.59E-3	8.24E-4	3.73E-4	4.79E-3	5.44E-5	5.13E-4	2.74E-6	-1.52E-3	3.84E-3
EP-fw	kg P eq	3.26E-5	1.65E-7	9.60E-7	3.37E-5	7.86E-8	3.60E-6	3.60E-9	-1.42E-5	2.32E-5
EP-m	kg N eq	5.97E-4	2.08E-4	7.38E-5	8.78E-4	1.95E-5	1.27E-4	1.94E-6	-2.66E-4	7.61E-4
EP-T	mol N eq	6.58E-3	2.31E-3	8.02E-4	9.68E-3	2.15E-4	1.40E-3	1.09E-5	-2.83E-3	8.47E-3
POCP	kg NMVOC eq	2.40E-3	6.02E-4	3.53E-4	3.36E-3	6.14E-5	4.19E-4	3.80E-6	-1.00E-3	2.84E-3
ADP-mm	kg Sb eq	3.82E-4	3.88E-7	1.69E-6	3.84E-4	2.47E-7	2.01E-6	2.75E-9	-7.85E-6	3.78E-4
ADP-f	MJ	2.06E+1	4.30E-1	7.64E-1	2.18E+1	1.47E-1	1.41E+0	8.22E-3	-1.05E+1	1.29E+1
WDP	m3 depriv.	1.14E+0	8.28E-4	2.32E-2	1.17E+0	4.50E-4	5.35E-2	5.48E-5	-5.57E-1	6.62E-1
PM	disease inc.	2.60E-8	1.47E-9	2.55E-9	3.00E-8	8.63E-10	6.48E-9	5.65E-11	-9.75E-9	2.77E-8
IR	kBq U-235 eq	4.29E-2	1.85E-3	1.90E-3	4.67E-2	6.41E-4	4.89E-3	3.79E-5	-1.79E-2	3.43E-2
ETP-fw	CTUe	1.54E+1	2.98E-1	1.99E+0	1.77E+1	1.19E-1	1.01E+1	1.11E-1	-5.33E+0	2.26E+1
HTP-c	CTUh	5.35E-10	1.71E-11	7.82E-11	6.30E-10	4.24E-12	1.64E-10	2.26E-13	-2.04E-10	5.94E-10
HTP-nc	CTUh	1.68E-8	2.78E-10	4.29E-9	2.13E-8	1.42E-10	3.69E-9	2.19E-11	-7.00E-9	1.82E-8
SQP	Pt	2.67E+0	1.48E-1	2.61E-1	3.08E+0	1.25E-1	8.93E-1	2.10E-2	-9.96E-1	3.12E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.35E-1	3.84E-3	4.14E+0	5.08E+0	2.10E-3	9.93E-2	3.09E-4	-4.04E-1	4.77E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.35E-1	3.84E-3	4.14E+0	5.08E+0	2.10E-3	9.93E-2	3.09E-4	-4.04E-1	4.77E+0
PENRE	MJ	2.21E+1	4.57E-1	8.12E-1	2.34E+1	1.56E-1	1.50E+0	8.73E-3	-1.13E+1	1.38E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.21E+1	4.57E-1	8.12E-1	2.34E+1	1.56E-1	1.50E+0	8.73E-3	-1.13E+1	1.38E+1
PET	MJ	2.31E+1	4.60E-1	4.95E+0	2.85E+1	1.58E-1	1.60E+0	9.04E-3	-1.17E+1	1.86E+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	1.38E-2	3.00E-5	6.76E-4	1.45E-2	1.66E-5	1.49E-3	1.01E-5	-5.90E-3	1.01E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.65E-5	5.97E-7	6.98E-6	6.41E-5	3.75E-7	2.29E-6	1.00E-8	-8.21E-6	5.85E-5
NHWD	kg	7.07E-2	8.43E-3	1.43E-3	8.06E-2	9.09E-3	5.48E-2	3.63E-2	-2.96E-2	1.51E-1
RWD	kg	4.02E-5	2.97E-6	1.85E-6	4.50E-5	9.97E-7	5.29E-6	5.35E-8	-1.59E-5	3.55E-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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