

Environmental Profile

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

Ecochain v3.5.71



Product: 3032529 - OsmaDrain Bend 45° BN 160 SN8 D/S
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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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	2.13E+0	9.23E-2	2.21E-1	2.44E+0	2.80E-2	7.76E-1	9.29E-3	-1.18E+0	2.07E+0
GWP-f	kg CO2 eq	2.11E+0	9.23E-2	2.15E-1	2.42E+0	2.80E-2	7.76E-1	9.28E-3	-1.17E+0	2.06E+0
GWP-b	kg CO2 eq	1.36E-2	-8.41E-6	5.63E-3	1.92E-2	1.70E-5	-8.11E-4	1.11E-5	-7.96E-3	1.04E-2
GWP-luluc	kg CO2 eq	1.68E-3	5.65E-5	1.81E-4	1.91E-3	9.89E-6	3.19E-4	2.33E-7	-7.27E-4	1.51E-3
ODP	kg CFC11 eq	1.05E-6	1.92E-8	1.96E-8	1.09E-6	6.44E-9	8.44E-8	3.29E-10	-5.55E-7	6.27E-7
AP	mol H+ eq	9.87E-3	2.43E-3	1.16E-3	1.35E-2	1.59E-4	1.49E-3	8.01E-6	-4.39E-3	1.07E-2
EP-fw	kg P eq	9.12E-5	4.67E-7	2.98E-6	9.47E-5	2.30E-7	1.06E-5	1.05E-8	-4.14E-5	6.41E-5
EP-m	kg N eq	1.63E-3	6.10E-4	2.30E-4	2.47E-3	5.70E-5	3.64E-4	5.67E-6	-7.59E-4	2.14E-3
EP-T	mol N eq	1.80E-2	6.77E-3	2.50E-3	2.72E-2	6.28E-4	4.01E-3	3.20E-5	-8.08E-3	2.38E-2
POCP	kg NMVOC eq	6.44E-3	1.77E-3	1.11E-3	9.32E-3	1.79E-4	1.21E-3	1.11E-5	-2.86E-3	7.86E-3
ADP-mm	kg Sb eq	1.14E-3	1.08E-6	5.21E-6	1.15E-3	7.23E-7	5.88E-6	8.04E-9	-2.30E-5	1.13E-3
ADP-f	MJ	5.64E+1	1.23E+0	2.38E+0	6.00E+1	4.29E-1	4.12E+0	2.41E-2	-2.92E+1	3.54E+1
WDP	m3 depriv.	3.26E+0	2.33E-3	7.27E-2	3.33E+0	1.32E-3	1.58E-1	1.59E-4	-1.63E+0	1.86E+0
PM	disease inc.	7.05E-8	4.11E-9	7.89E-9	8.25E-8	2.52E-9	1.88E-8	1.65E-10	-2.83E-8	7.58E-8
IR	kBq U-235 eq	1.22E-1	5.32E-3	5.94E-3	1.33E-1	1.88E-3	1.43E-2	1.11E-4	-5.23E-2	9.73E-2
ETP-fw	CTUe	4.34E+1	8.50E-1	6.17E+0	5.04E+1	3.48E-1	2.97E+1	3.29E-1	-1.56E+1	6.53E+1
HTP-c	CTUh	1.54E-9	4.96E-11	2.42E-10	1.83E-9	1.24E-11	4.64E-10	6.60E-13	-5.94E-10	1.71E-9
HTP-nc	CTUh	4.83E-8	7.84E-10	1.35E-8	6.25E-8	4.15E-10	1.07E-8	6.47E-11	-2.05E-8	5.32E-8
SQP	Pt	7.25E+0	4.04E-1	8.08E-1	8.46E+0	3.67E-1	2.60E+0	6.15E-2	-2.89E+0	8.59E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.59E+0	1.08E-2	1.28E+1	1.54E+1	6.16E-3	2.92E-1	9.06E-4	-1.18E+0	1.45E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.59E+0	1.08E-2	1.28E+1	1.54E+1	6.16E-3	2.92E-1	9.06E-4	-1.18E+0	1.45E+1
PENRE	MJ	6.05E+1	1.31E+0	2.53E+0	6.43E+1	4.56E-1	4.39E+0	2.55E-2	-3.14E+1	3.77E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.05E+1	1.31E+0	2.53E+0	6.43E+1	4.56E-1	4.39E+0	2.55E-2	-3.14E+1	3.77E+1
PET	MJ	6.31E+1	1.32E+0	1.53E+1	7.97E+1	4.62E-1	4.68E+0	2.64E-2	-3.26E+1	5.22E+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	3.80E-2	8.43E-5	2.11E-3	4.02E-2	4.86E-5	4.36E-3	2.95E-5	-1.72E-2	2.74E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.68E-4	1.67E-6	2.21E-5	1.92E-4	1.10E-6	6.67E-6	2.93E-8	-2.26E-5	1.77E-4
NHWD	kg	1.97E-1	2.25E-2	4.52E-3	2.24E-1	2.66E-2	1.54E-1	1.06E-1	-8.64E-2	4.25E-1
RWD	kg	1.14E-4	8.53E-6	5.86E-6	1.29E-4	2.92E-6	1.54E-5	1.57E-7	-4.61E-5	1.01E-4
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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