

Environmental Profile

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

Ecochain v3.5.71



Product: 3036665 - OsmaDrain Bend 15° 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

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	1.94E+0	8.41E-2	1.98E-1	2.22E+0	2.54E-2	7.07E-1	8.49E-3	-1.07E+0	1.89E+0
GWP-f	kg CO2 eq	1.92E+0	8.40E-2	1.93E-1	2.20E+0	2.54E-2	7.07E-1	8.49E-3	-1.07E+0	1.88E+0
GWP-b	kg CO2 eq	1.18E-2	-6.62E-6	5.04E-3	1.69E-2	1.54E-5	-7.42E-4	1.01E-5	-7.22E-3	8.95E-3
GWP-luluc	kg CO2 eq	1.52E-3	5.11E-5	1.62E-4	1.73E-3	9.00E-6	2.88E-4	2.12E-7	-6.58E-4	1.37E-3
ODP	kg CFC11 eq	9.47E-7	1.75E-8	1.76E-8	9.82E-7	5.86E-9	7.58E-8	3.00E-10	-5.02E-7	5.62E-7
AP	mol H+ eq	8.99E-3	2.18E-3	1.04E-3	1.22E-2	1.45E-4	1.34E-3	7.29E-6	-3.98E-3	9.72E-3
EP-fw	kg P eq	8.25E-5	4.30E-7	2.68E-6	8.57E-5	2.09E-7	9.53E-6	9.56E-9	-3.75E-5	5.79E-5
EP-m	kg N eq	1.48E-3	5.49E-4	2.06E-4	2.24E-3	5.18E-5	3.29E-4	5.22E-6	-6.89E-4	1.94E-3
EP-T	mol N eq	1.63E-2	6.10E-3	2.24E-3	2.47E-2	5.71E-4	3.63E-3	2.91E-5	-7.34E-3	2.16E-2
POCP	kg NMVOC eq	5.90E-3	1.59E-3	9.93E-4	8.48E-3	1.63E-4	1.09E-3	1.01E-5	-2.60E-3	7.14E-3
ADP-mm	kg Sb eq	1.01E-3	1.01E-6	4.67E-6	1.02E-3	6.58E-7	5.31E-6	7.31E-9	-2.08E-5	1.00E-3
ADP-f	MJ	5.16E+1	1.13E+0	2.13E+0	5.48E+1	3.90E-1	3.73E+0	2.19E-2	-2.66E+1	3.24E+1
WDP	m3 depriv.	2.94E+0	2.16E-3	6.52E-2	3.00E+0	1.20E-3	1.42E-1	1.44E-4	-1.48E+0	1.67E+0
PM	disease inc.	6.49E-8	3.81E-9	7.08E-9	7.58E-8	2.30E-9	1.70E-8	1.50E-10	-2.57E-8	6.96E-8
IR	kBq U-235 eq	1.11E-1	4.86E-3	5.33E-3	1.22E-1	1.71E-3	1.29E-2	1.01E-4	-4.73E-2	8.91E-2
ETP-fw	CTUe	3.92E+1	7.79E-1	5.53E+0	4.55E+1	3.17E-1	2.67E+1	2.95E-1	-1.41E+1	5.87E+1
HTP-c	CTUh	1.38E-9	4.51E-11	2.17E-10	1.65E-9	1.13E-11	4.20E-10	6.00E-13	-5.38E-10	1.54E-9
HTP-nc	CTUh	4.34E-8	7.23E-10	1.21E-8	5.62E-8	3.78E-10	9.67E-9	5.81E-11	-1.85E-8	4.78E-8
SQP	Pt	6.62E+0	3.81E-1	7.24E-1	7.73E+0	3.34E-1	2.36E+0	5.59E-2	-2.62E+0	7.86E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.35E+0	1.00E-2	1.14E+1	1.38E+1	5.60E-3	2.63E-1	8.25E-4	-1.07E+0	1.30E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.35E+0	1.00E-2	1.14E+1	1.38E+1	5.60E-3	2.63E-1	8.25E-4	-1.07E+0	1.30E+1
PENRE	MJ	5.53E+1	1.20E+0	2.27E+0	5.87E+1	4.14E-1	3.97E+0	2.32E-2	-2.87E+1	3.45E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.53E+1	1.20E+0	2.27E+0	5.87E+1	4.14E-1	3.97E+0	2.32E-2	-2.87E+1	3.45E+1
PET	MJ	5.76E+1	1.21E+0	1.37E+1	7.26E+1	4.20E-1	4.23E+0	2.40E-2	-2.97E+1	4.75E+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	3.45E-2	7.80E-5	1.89E-3	3.64E-2	4.42E-5	3.93E-3	2.68E-5	-1.56E-2	2.48E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.49E-4	1.55E-6	1.98E-5	1.70E-4	9.98E-7	6.03E-6	2.66E-8	-2.05E-5	1.57E-4
NHWD	kg	1.78E-1	2.15E-2	4.05E-3	2.04E-1	2.42E-2	1.40E-1	9.67E-2	-7.82E-2	3.87E-1
RWD	kg	1.05E-4	7.79E-6	5.25E-6	1.18E-4	2.65E-6	1.40E-5	1.42E-7	-4.17E-5	9.33E-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