

# Environmental Profile

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

Ecochain v3.5.71



Product: 3039683 - Wavin UR Rock-Pipe BN 150 SN8 L=0.6 S/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 Osma UltraRib Corrugated pipe systems are designed for use in gravity drainage and sewerage installations at depths of up to 10 metres. Osma UltraRib is a fully socketed system of pipe and fittings which combines secure jointing with ease of installation.

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	3.36E+0	1.49E-1	1.95E-1	3.70E+0	4.76E-2	1.24E+0	1.41E-2	-1.87E+0	3.14E+0
GWP-f	kg CO2 eq	3.32E+0	1.49E-1	1.86E-1	3.66E+0	4.76E-2	1.24E+0	1.41E-2	-1.85E+0	3.11E+0
GWP-b	kg CO2 eq	3.37E-2	-2.75E-5	9.32E-3	4.30E-2	2.89E-5	-1.29E-3	1.77E-5	-1.31E-2	2.86E-2
GWP-luluc	kg CO2 eq	3.10E-3	9.64E-5	8.82E-5	3.28E-3	1.68E-5	5.66E-4	3.85E-7	-1.22E-3	2.65E-3
ODP	kg CFC11 eq	1.84E-6	3.04E-8	2.39E-8	1.90E-6	1.10E-8	1.52E-7	5.49E-10	-9.43E-7	1.12E-6
AP	mol H+ eq	1.61E-2	4.33E-3	8.40E-4	2.13E-2	2.71E-4	2.61E-3	1.33E-5	-7.09E-3	1.71E-2
EP-fw	kg P eq	1.61E-4	6.90E-7	2.35E-6	1.64E-4	3.92E-7	1.88E-5	1.72E-8	-6.93E-5	1.14E-4
EP-m	kg N eq	2.76E-3	1.07E-3	2.23E-4	4.05E-3	9.70E-5	6.32E-4	8.01E-6	-1.22E-3	3.57E-3
EP-T	mol N eq	3.03E-2	1.19E-2	2.29E-3	4.46E-2	1.07E-3	6.96E-3	5.30E-5	-1.30E-2	3.96E-2
POCP	kg NMVOC eq	9.82E-3	3.11E-3	1.24E-3	1.42E-2	3.06E-4	2.09E-3	1.81E-5	-4.52E-3	1.21E-2
ADP-mm	kg Sb eq	4.61E-3	1.46E-6	2.47E-6	4.61E-3	1.23E-6	1.03E-5	1.33E-8	-3.84E-5	4.58E-3
ADP-f	MJ	8.34E+1	1.95E+0	2.04E+0	8.74E+1	7.31E-1	7.20E+0	4.00E-2	-4.52E+1	5.02E+1
WDP	m3 depriv.	5.64E+0	3.33E-3	7.60E-2	5.71E+0	2.24E-3	2.81E-1	2.78E-4	-2.71E+0	3.29E+0
PM	disease inc.	1.00E-7	5.72E-9	5.22E-9	1.11E-7	4.30E-9	3.27E-8	2.74E-10	-4.49E-8	1.04E-7
IR	kBq U-235 eq	1.93E-1	8.40E-3	6.78E-3	2.08E-1	3.19E-3	2.52E-2	1.83E-4	-8.73E-2	1.49E-1
ETP-fw	CTUe	9.58E+1	1.31E+0	3.70E+0	1.01E+2	5.93E-1	5.41E+1	5.97E-1	-2.62E+1	1.30E+2
HTP-c	CTUh	3.03E-9	8.20E-11	1.46E-10	3.26E-9	2.11E-11	8.10E-10	1.09E-12	-9.91E-10	3.10E-9
HTP-nc	CTUh	9.96E-8	1.14E-9	1.59E-8	1.17E-7	7.07E-10	1.91E-8	1.15E-10	-3.44E-8	1.02E-7
SQP	Pt	1.16E+1	4.77E-1	5.33E-1	1.26E+1	6.25E-1	4.49E+0	1.02E-1	-4.82E+0	1.30E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.35E+0	1.54E-2	5.55E+0	9.92E+0	1.05E-2	5.17E-1	1.44E-3	-1.97E+0	8.49E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.35E+0	1.54E-2	5.55E+0	9.92E+0	1.05E-2	5.17E-1	1.44E-3	-1.97E+0	8.49E+0
PENRE	MJ	8.94E+1	2.07E+0	2.17E+0	9.37E+1	7.76E-1	7.66E+0	4.24E-2	-4.87E+1	5.35E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.94E+1	2.07E+0	2.17E+0	9.37E+1	7.76E-1	7.66E+0	4.24E-2	-4.87E+1	5.35E+1
PET	MJ	9.38E+1	2.09E+0	7.72E+0	1.04E+2	7.86E-1	8.18E+0	4.39E-2	-5.06E+1	6.20E+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	6.30E-2	1.20E-4	1.98E-3	6.51E-2	8.27E-5	7.68E-3	4.88E-5	-2.83E-2	4.46E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.40E-4	2.27E-6	3.50E-5	6.77E-4	1.87E-6	1.16E-5	4.87E-8	-3.74E-5	6.53E-4
NHWD	kg	3.40E-1	2.22E-2	6.86E-3	3.69E-1	4.53E-2	2.64E-1	1.81E-1	-1.44E-1	7.15E-1
RWD	kg	1.66E-4	1.35E-5	9.28E-6	1.88E-4	4.97E-6	2.70E-5	2.60E-7	-7.69E-5	1.44E-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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