

# Environmental Profile

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

Ecochain v3.5.71



Product: 3039673 - Wavin UR Coupler BN 225 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 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	2.95E+0	1.28E-1	2.39E-1	3.32E+0	3.95E-2	1.07E+0	1.23E-2	-1.65E+0	2.79E+0
GWP-f	kg CO2 eq	2.92E+0	1.27E-1	2.31E-1	3.28E+0	3.94E-2	1.07E+0	1.23E-2	-1.63E+0	2.77E+0
GWP-b	kg CO2 eq	2.61E-2	-2.74E-5	7.48E-3	3.35E-2	2.39E-5	-1.08E-3	1.55E-5	-1.15E-2	2.09E-2
GWP-luluc	kg CO2 eq	2.44E-3	8.40E-5	1.72E-4	2.70E-3	1.40E-5	4.87E-4	3.28E-7	-1.07E-3	2.13E-3
ODP	kg CFC11 eq	1.64E-6	2.59E-8	2.33E-8	1.68E-6	9.09E-9	1.33E-7	4.64E-10	-8.31E-7	9.96E-7
AP	mol H+ eq	1.36E-2	3.82E-3	1.19E-3	1.86E-2	2.25E-4	2.24E-3	1.13E-5	-6.25E-3	1.48E-2
EP-fw	kg P eq	1.34E-4	5.73E-7	3.13E-6	1.37E-4	3.24E-7	1.63E-5	1.48E-8	-6.10E-5	9.30E-5
EP-m	kg N eq	2.29E-3	9.45E-4	2.55E-4	3.49E-3	8.04E-5	5.38E-4	6.93E-6	-1.08E-3	3.03E-3
EP-T	mol N eq	2.49E-2	1.05E-2	2.73E-3	3.82E-2	8.86E-4	5.93E-3	4.50E-5	-1.15E-2	3.36E-2
POCP	kg NMVOC eq	8.44E-3	2.73E-3	1.28E-3	1.24E-2	2.53E-4	1.78E-3	1.55E-5	-3.98E-3	1.05E-2
ADP-mm	kg Sb eq	1.71E-3	1.17E-6	4.94E-6	1.72E-3	1.02E-6	8.84E-6	1.13E-8	-3.38E-5	1.70E-3
ADP-f	MJ	7.46E+1	1.66E+0	2.55E+0	7.88E+1	6.05E-1	6.12E+0	3.39E-2	-3.99E+1	4.57E+1
WDP	m3 depriv.	4.94E+0	2.73E-3	8.23E-2	5.03E+0	1.86E-3	2.45E-1	2.31E-4	-2.39E+0	2.89E+0
PM	disease inc.	8.78E-8	4.65E-9	7.97E-9	1.00E-7	3.56E-9	2.76E-8	2.33E-10	-3.96E-8	9.23E-8
IR	kBq U-235 eq	1.62E-1	7.14E-3	6.91E-3	1.76E-1	2.65E-3	2.15E-2	1.55E-4	-7.69E-2	1.24E-1
ETP-fw	CTUe	6.34E+1	1.10E+0	6.10E+0	7.06E+1	4.91E-1	4.78E+1	5.30E-1	-2.30E+1	9.64E+1
HTP-c	CTUh	2.28E-9	7.07E-11	2.40E-10	2.59E-9	1.75E-11	6.82E-10	9.39E-13	-8.74E-10	2.42E-9
HTP-nc	CTUh	7.33E-8	9.40E-10	1.58E-8	9.01E-8	5.86E-10	1.65E-8	1.02E-10	-3.03E-8	7.70E-8
SQP	Pt	9.57E+0	3.61E-1	8.15E-1	1.07E+1	5.18E-1	3.76E+0	8.66E-2	-4.24E+0	1.09E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.68E+0	1.26E-2	1.20E+1	1.56E+1	8.68E-3	4.46E-1	1.25E-3	-1.73E+0	1.44E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.68E+0	1.26E-2	1.20E+1	1.56E+1	8.68E-3	4.46E-1	1.25E-3	-1.73E+0	1.44E+1
PENRE	MJ	8.01E+1	1.76E+0	2.71E+0	8.45E+1	6.43E-1	6.51E+0	3.60E-2	-4.29E+1	4.88E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.01E+1	1.76E+0	2.71E+0	8.45E+1	6.43E-1	6.51E+0	3.60E-2	-4.29E+1	4.88E+1
PET	MJ	8.37E+1	1.78E+0	1.47E+1	1.00E+2	6.51E-1	6.96E+0	3.72E-2	-4.47E+1	6.32E+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	5.37E-2	9.80E-5	2.31E-3	5.62E-2	6.85E-5	6.68E-3	4.14E-5	-2.49E-2	3.81E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.66E-4	1.83E-6	2.89E-5	2.97E-4	1.55E-6	9.86E-6	4.13E-8	-3.30E-5	2.75E-4
NHWD	kg	2.87E-1	1.51E-2	5.80E-3	3.08E-1	3.75E-2	2.21E-1	1.50E-1	-1.27E-1	5.90E-1
RWD	kg	1.41E-4	1.15E-5	7.65E-6	1.60E-4	4.12E-6	2.29E-5	2.20E-7	-6.77E-5	1.20E-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



Ecochain Technologies BV  
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands  
<https://www.ecochain.com>  
+31 20 3035 777