

Environmental Profile

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

Ecochain v3.5.71



Product: 3039671 - Wavin UR Junction 87.5° BN 150 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

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	3.51E+0	1.52E-1	2.83E-1	3.95E+0	4.69E-2	1.27E+0	1.47E-2	-1.96E+0	3.32E+0
GWP-f	kg CO2 eq	3.48E+0	1.52E-1	2.74E-1	3.90E+0	4.69E-2	1.28E+0	1.47E-2	-1.94E+0	3.30E+0
GWP-b	kg CO2 eq	3.10E-2	-3.26E-5	8.85E-3	3.98E-2	2.85E-5	-1.28E-3	1.85E-5	-1.37E-2	2.49E-2
GWP-luluc	kg CO2 eq	2.90E-3	9.99E-5	2.04E-4	3.21E-3	1.66E-5	5.79E-4	3.91E-7	-1.27E-3	2.53E-3
ODP	kg CFC11 eq	1.95E-6	3.09E-8	2.76E-8	2.00E-6	1.08E-8	1.58E-7	5.52E-10	-9.89E-7	1.18E-6
AP	mol H+ eq	1.61E-2	4.54E-3	1.41E-3	2.21E-2	2.67E-4	2.66E-3	1.34E-5	-7.43E-3	1.76E-2
EP-fw	kg P eq	1.59E-4	6.82E-7	3.71E-6	1.64E-4	3.86E-7	1.93E-5	1.76E-8	-7.26E-5	1.11E-4
EP-m	kg N eq	2.72E-3	1.12E-3	3.02E-4	4.15E-3	9.56E-5	6.40E-4	8.25E-6	-1.28E-3	3.61E-3
EP-T	mol N eq	2.96E-2	1.25E-2	3.23E-3	4.54E-2	1.05E-3	7.06E-3	5.35E-5	-1.36E-2	3.99E-2
POCP	kg NMVOC eq	1.00E-2	3.25E-3	1.52E-3	1.48E-2	3.01E-4	2.11E-3	1.84E-5	-4.74E-3	1.25E-2
ADP-mm	kg Sb eq	2.04E-3	1.40E-6	5.85E-6	2.05E-3	1.21E-6	1.05E-5	1.35E-8	-4.03E-5	2.02E-3
ADP-f	MJ	8.88E+1	1.98E+0	3.02E+0	9.38E+1	7.20E-1	7.28E+0	4.03E-2	-4.74E+1	5.44E+1
WDP	m3 depriv.	5.88E+0	3.25E-3	9.75E-2	5.98E+0	2.21E-3	2.91E-1	2.75E-4	-2.84E+0	3.44E+0
PM	disease inc.	1.04E-7	5.53E-9	9.43E-9	1.19E-7	4.23E-9	3.28E-8	2.77E-10	-4.71E-8	1.10E-7
IR	kBq U-235 eq	1.93E-1	8.50E-3	8.18E-3	2.10E-1	3.15E-3	2.56E-2	1.85E-4	-9.15E-2	1.47E-1
ETP-fw	CTUe	7.54E+1	1.31E+0	7.23E+0	8.39E+1	5.85E-1	5.69E+1	6.31E-1	-2.73E+1	1.15E+2
HTP-c	CTUh	2.71E-9	8.41E-11	2.84E-10	3.08E-9	2.08E-11	8.12E-10	1.12E-12	-1.04E-9	2.87E-9
HTP-nc	CTUh	8.72E-8	1.12E-9	1.87E-8	1.07E-7	6.97E-10	1.97E-8	1.21E-10	-3.60E-8	9.15E-8
SQP	Pt	1.14E+1	4.29E-1	9.65E-1	1.28E+1	6.16E-1	4.47E+0	1.03E-1	-5.05E+0	1.29E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.38E+0	1.50E-2	1.42E+1	1.85E+1	1.03E-2	5.31E-1	1.49E-3	-2.06E+0	1.70E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.38E+0	1.50E-2	1.42E+1	1.85E+1	1.03E-2	5.31E-1	1.49E-3	-2.06E+0	1.70E+1
PENRE	MJ	9.53E+1	2.10E+0	3.21E+0	1.01E+2	7.64E-1	7.74E+0	4.28E-2	-5.11E+1	5.80E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.53E+1	2.10E+0	3.21E+0	1.01E+2	7.64E-1	7.74E+0	4.28E-2	-5.11E+1	5.80E+1
PET	MJ	9.96E+1	2.11E+0	1.74E+1	1.19E+2	7.75E-1	8.28E+0	4.43E-2	-5.31E+1	7.51E+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	6.39E-2	1.17E-4	2.74E-3	6.68E-2	8.15E-5	7.95E-3	4.93E-5	-2.96E-2	4.53E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.17E-4	2.17E-6	3.42E-5	3.53E-4	1.84E-6	1.17E-5	4.92E-8	-3.93E-5	3.28E-4
NHWD	kg	3.42E-1	1.80E-2	6.87E-3	3.67E-1	4.46E-2	2.63E-1	1.78E-1	-1.51E-1	7.01E-1
RWD	kg	1.68E-4	1.37E-5	9.05E-6	1.90E-4	4.90E-6	2.72E-5	2.62E-7	-8.06E-5	1.42E-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