

Environmental Profile

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

Ecochain v3.5.71



Product: 3039668 - Wavin UR Bend-BS Skt 87.5° BN 150 SN8 D/
 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	2.68E+0	1.16E-1	2.25E-1	3.02E+0	3.58E-2	9.72E-1	1.12E-2	-1.49E+0	2.54E+0
GWP-f	kg CO2 eq	2.65E+0	1.16E-1	2.18E-1	2.99E+0	3.58E-2	9.72E-1	1.12E-2	-1.48E+0	2.52E+0
GWP-b	kg CO2 eq	2.36E-2	-2.48E-5	7.04E-3	3.07E-2	2.17E-5	-9.78E-4	1.41E-5	-1.05E-2	1.92E-2
GWP-luluc	kg CO2 eq	2.21E-3	7.61E-5	1.62E-4	2.45E-3	1.27E-5	4.41E-4	2.98E-7	-9.71E-4	1.94E-3
ODP	kg CFC11 eq	1.48E-6	2.35E-8	2.19E-8	1.53E-6	8.24E-9	1.21E-7	4.21E-10	-7.54E-7	9.03E-7
AP	mol H+ eq	1.23E-2	3.46E-3	1.12E-3	1.69E-2	2.04E-4	2.03E-3	1.02E-5	-5.67E-3	1.35E-2
EP-fw	kg P eq	1.21E-4	5.20E-7	2.95E-6	1.25E-4	2.94E-7	1.47E-5	1.34E-8	-5.53E-5	8.45E-5
EP-m	kg N eq	2.08E-3	8.57E-4	2.40E-4	3.17E-3	7.29E-5	4.88E-4	6.29E-6	-9.78E-4	2.76E-3
EP-T	mol N eq	2.26E-2	9.53E-3	2.57E-3	3.47E-2	8.03E-4	5.38E-3	4.08E-5	-1.04E-2	3.06E-2
POCP	kg NMVOC eq	7.65E-3	2.47E-3	1.21E-3	1.13E-2	2.30E-4	1.61E-3	1.40E-5	-3.61E-3	9.58E-3
ADP-mm	kg Sb eq	1.56E-3	1.07E-6	4.66E-6	1.57E-3	9.25E-7	8.01E-6	1.03E-8	-3.07E-5	1.55E-3
ADP-f	MJ	6.77E+1	1.51E+0	2.41E+0	7.16E+1	5.49E-1	5.55E+0	3.07E-2	-3.61E+1	4.16E+1
WDP	m3 depriv.	4.48E+0	2.48E-3	7.75E-2	4.56E+0	1.69E-3	2.22E-1	2.10E-4	-2.16E+0	2.62E+0
PM	disease inc.	7.97E-8	4.22E-9	7.51E-9	9.14E-8	3.23E-9	2.50E-8	2.11E-10	-3.59E-8	8.40E-8
IR	kBq U-235 eq	1.47E-1	6.48E-3	6.51E-3	1.60E-1	2.40E-3	1.95E-2	1.41E-4	-6.97E-2	1.12E-1
ETP-fw	CTUe	5.75E+1	9.99E-1	5.75E+0	6.43E+1	4.46E-1	4.33E+1	4.80E-1	-2.08E+1	8.77E+1
HTP-c	CTUh	2.07E-9	6.41E-11	2.26E-10	2.36E-9	1.59E-11	6.19E-10	8.52E-13	-7.92E-10	2.20E-9
HTP-nc	CTUh	6.65E-8	8.52E-10	1.49E-8	8.23E-8	5.32E-10	1.50E-8	9.23E-11	-2.75E-8	7.04E-8
SQP	Pt	8.70E+0	3.27E-1	7.68E-1	9.79E+0	4.70E-1	3.41E+0	7.86E-2	-3.85E+0	9.90E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.34E+0	1.15E-2	1.13E+1	1.46E+1	7.88E-3	4.05E-1	1.13E-3	-1.57E+0	1.35E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.34E+0	1.15E-2	1.13E+1	1.46E+1	7.88E-3	4.05E-1	1.13E-3	-1.57E+0	1.35E+1
PENRE	MJ	7.26E+1	1.60E+0	2.55E+0	7.67E+1	5.83E-1	5.90E+0	3.26E-2	-3.89E+1	4.43E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.26E+1	1.60E+0	2.55E+0	7.67E+1	5.83E-1	5.90E+0	3.26E-2	-3.89E+1	4.43E+1
PET	MJ	7.59E+1	1.61E+0	1.38E+1	9.14E+1	5.91E-1	6.31E+0	3.38E-2	-4.05E+1	5.78E+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	4.88E-2	8.89E-5	2.18E-3	5.10E-2	6.21E-5	6.06E-3	3.76E-5	-2.26E-2	3.46E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.42E-4	1.66E-6	2.72E-5	2.71E-4	1.40E-6	8.94E-6	3.75E-8	-2.99E-5	2.52E-4
NHWD	kg	2.61E-1	1.37E-2	5.47E-3	2.80E-1	3.40E-2	2.00E-1	1.36E-1	-1.15E-1	5.36E-1
RWD	kg	1.28E-4	1.04E-5	7.20E-6	1.45E-4	3.73E-6	2.07E-5	2.00E-7	-6.14E-5	1.09E-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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