Environmental Profile

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

Ecochain v3.5.71

Product:	3039657 - Wavin UR Access Cover BN 150 SN8 S/S
Unit:	1 piece
Manufacturer:	Wavin - UK - Chippenham - Verified

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.

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

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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.58E+0	1.11E-1	4.56E-1	3.15E+0	3.42E-2	9.44E-1	1.10E-2	-1.44E+0	2.70E+0
GWP-f	kg CO2 eq	2.56E+0	1.11E-1	4.50E-1	3.12E+0	3.42E-2	9.44E-1	1.10E-2	-1.43E+0	2.69E+0
GWP-b	kg CO2 eq	1.99E-2	-1.81E-5	6.17E-3	2.61E-2	2.07E-5	-9.57E-4	1.35E-5	-9.88E-3	1.53E-2
GWP-luluc	kg CO2 eq	2.09E-3	7.12E-5	4.62E-4	2.63E-3	1.21E-5	4.08E-4	2.85E-7	-9.11E-4	2.14E-3
ODP	kg CFC11 eq	1.36E-6	2.29E-8	3.22E-8	1.42E-6	7.87E-9	1.10E-7	4.03E-10	-7.03E-7	8.33E-7
AP	mol H+ eq	1.19E-2	3.16E-3	2.62E-3	1.77E-2	1.95E-4	1.89E-3	9.79E-6	-5.39E-3	1.44E-2
EP-fw	kg P eq	1.14E-4	5.27E-7	6.52E-6	1.21E-4	2.81E-7	1.36E-5	1.28E-8	-5.19E-5	8.33E-5
EP-m	kg N eq	1.99E-3	7.88E-4	4.51E-4	3.23E-3	6.96E-5	4.58E-4	6.41E-6	-9.32E-4	2.83E-3
EP-T	mol N eq	2.18E-2	8.76E-3	5.06E-3	3.56E-2	7.67E-4	5.04E-3	3.91E-5	-9.91E-3	3.16E-2
POCP	kg NMVOC eq	7.58E-3	2.28E-3	1.95E-3	1.18E-2	2.19E-4	1.51E-3	1.35E-5	-3.47E-3	1.01E-2
ADP-mm	kg Sb eq	1.45E-3	1.14E-6	1.34E-5	1.47E-3	8.84E-7	7.46E-6	9.83E-9	-2.89E-5	1.45E-3
ADP-f	MJ	6.66E+1	1.47E+0	4.99E+0	7.31E+1	5.24E-1	5.19E+0	2.94E-2	-3.50E+1	4.38E+1
WDP	m3 depriv.	4.16E+0	2.57E-3	1.35E-1	4.30E+0	1.61E-3	2.04E-1	1.98E-4	-2.04E+0	2.47E+0
PM	disease inc.	8.07E-8	4.44E-9	1.85E-8	1.04E-7	3.08E-9	2.35E-8	2.02E-10	-3.44E-8	9.61E-8
IR	kBq U-235 eq	1.44E-1	6.32E-3	1.03E-2	1.61E-1	2.29E-3	1.81E-2	1.35E-4	-6.55E-2	1.16E-1
ETP-fw	CTUe	5.43E+1	9.89E-1	1.49E+1	7.02E+1	4.26E-1	3.93E+1	4.35E-1	-1.95E+1	9.08E+1
HTP-c	CTUh	1.94E-9	6.10E-11	5.84E-10	2.58E-9	1.52E-11	5.81E-10	8.12E-13	-7.44E-10	2.44E-9
HTP-nc	CTUh	6.17E-8	8.74E-10	2.28E-8	8.54E-8	5.08E-10	1.38E-8	8.44E-11	-2.57E-8	7.40E-8
SQP	Pt	8.57E+0	3.88E-1	1.89E+0	1.09E+1	4.49E-1	3.22E+0	7.51E-2	-3.62E+0	1.10E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.19E+0	1.19E-2	3.35E+1	3.67E+1	7.52E-3	3.74E-1	1.09E-3	-1.48E+0	3.56E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.19E+0	1.19E-2	3.35E+1	3.67E+1	7.52E-3	3.74E-1	1.09E-3	-1.48E+0	3.56E+1
PENRE	MJ	7.14E+1	1.56E+0	5.29E+0	7.83E+1	5.57E-1	5.52E+0	3.12E-2	-3.77E+1	4.66E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.14E+1	1.56E+0	5.29E+0	7.83E+1	5.57E-1	5.52E+0	3.12E-2	-3.77E+1	4.66E+1
PET	MJ	7.46E+1	1.57E+0	3.88E+1	1.15E+2	5.64E-1	5.90E+0	3.23E-2	-3.92E+1	8.22E+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	4.66E-2	9.25E-5	4.20E-3	5.09E-2	5.94E-5	5.60E-3	3.60E-5	-2.13E-2	3.53E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.21E-4	1.77E-6	2.63E-5	2.49E-4	1.34E-6	8.38E-6	3.58E-8	-2.83E-5	2.30E-4
NHWD	kg	2.46E-1	1.91E-2	5.75E-3	2.71E-1	3.25E-2	1.90E-1	1.30E-1	-1.08E-1	5.16E-1
RWD	kg	1.30E-4	1.02E-5	6.96E-6	1.47E-4	3.57E-6	1.94E-5	1.91E-7	-5.77E-5	1.13E-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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