Environmental Profile

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

Ecochain v3.5.71

Product:	3036775 - Wavin UR Adapt-URSptxBSSkt BN 150 SN8 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	9.05E-1	3.93E-2	1.09E-1	1.05E+0	1.19E-2	3.30E-1	3.98E-3	-5.02E-1	8.97E-1
GWP-f	kg CO2 eq	8.99E-1	3.93E-2	1.06E-1	1.04E+0	1.18E-2	3.30E-1	3.98E-3	-4.98E-1	8.92E-1
GWP-b	kg CO2 eq	5.35E-3	-2.67E-6	2.33E-3	7.68E-3	7.19E-6	-3.47E-4	4.72E-6	-3.36E-3	3.99E-3
GWP-luluc	kg CO2 eq	7.04E-4	2.37E-5	9.61E-5	8.24E-4	4.19E-6	1.33E-4	9.86E-8	-3.06E-4	6.56E-4
ODP	kg CFC11 eq	4.37E-7	8.19E-9	8.97E-9	4.55E-7	2.73E-9	3.50E-8	1.40E-10	-2.33E-7	2.60E-7
AP	mol H+ eq	4.20E-3	1.01E-3	5.88E-4	5.79E-3	6.75E-5	6.23E-4	3.40E-6	-1.86E-3	4.63E-3
EP-fw	kg P eq	3.83E-5	2.03E-7	1.50E-6	4.00E-5	9.75E-8	4.41E-6	4.46E-9	-1.74E-5	2.71E-5
EP-m	kg N eq	6.92E-4	2.54E-4	1.11E-4	1.06E-3	2.41E-5	1.53E-4	2.46E-6	-3.21E-4	9.16E-4
EP-T	mol N eq	7.62E-3	2.82E-3	1.22E-3	1.17E-2	2.66E-4	1.68E-3	1.36E-5	-3.42E-3	1.02E-2
POCP	kg NMVOC eq	2.76E-3	7.36E-4	5.18E-4	4.02E-3	7.61E-5	5.07E-4	4.71E-6	-1.22E-3	3.39E-3
ADP-mm	kg Sb eq	4.69E-4	4.79E-7	2.78E-6	4.72E-4	3.06E-7	2.46E-6	3.40E-9	-9.68E-6	4.65E-4
ADP-f	MJ	2.42E+1	5.28E-1	1.18E+0	2.59E+1	1.82E-1	1.73E+0	1.02E-2	-1.24E+1	1.54E+1
WDP	m3 depriv.	1.36E+0	1.02E-3	3.46E-2	1.39E+0	5.58E-4	6.55E-2	6.67E-5	-6.86E-1	7.75E-1
PM	disease inc.	3.05E-8	1.81E-9	4.06E-9	3.64E-8	1.07E-9	7.92E-9	7.01E-11	-1.20E-8	3.34E-8
IR	kBq U-235 eq	5.22E-2	2.28E-3	2.77E-3	5.72E-2	7.95E-4	5.98E-3	4.70E-5	-2.20E-2	4.21E-2
ETP-fw	CTUe	1.82E+1	3.66E-1	3.21E+0	2.18E+1	1.48E-1	1.23E+1	1.36E-1	-6.54E+0	2.78E+1
HTP-c	CTUh	6.42E-10	2.10E-11	1.26E-10	7.89E-10	5.25E-12	1.95E-10	2.79E-13	-2.50E-10	7.40E-10
HTP-nc	CTUh	2.01E-8	3.42E-10	6.22E-9	2.67E-8	1.76E-10	4.47E-9	2.68E-11	-8.61E-9	2.27E-8
SQP	Pt	3.10E+0	1.83E-1	4.16E-1	3.70E+0	1.56E-1	1.10E+0	2.61E-2	-1.21E+0	3.76E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.09E+0	4.74E-3	6.85E+0	7.95E+0	2.61E-3	1.22E-1	3.85E-4	-4.97E-1	7.58E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.09E+0	4.74E-3	6.85E+0	7.95E+0	2.61E-3	1.22E-1	3.85E-4	-4.97E-1	7.58E+0
PENRE	MJ	2.59E+1	5.61E-1	1.25E+0	2.77E+1	1.93E-1	1.84E+0	1.08E-2	-1.34E+1	1.64E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.59E+1	5.61E-1	1.25E+0	2.77E+1	1.93E-1	1.84E+0	1.08E-2	-1.34E+1	1.64E+1
PET	MJ	2.70E+1	5.65E-1	8.10E+0	3.57E+1	1.96E-1	1.96E+0	1.12E-2	-1.39E+1	2.39E+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	1.61E-2	3.70E-5	1.02E-3	1.71E-2	2.06E-5	1.82E-3	1.25E-5	-7.26E-3	1.17E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.86E-5	7.38E-7	9.31E-6	7.87E-5	4.65E-7	2.80E-6	1.24E-8	-9.51E-6	7.24E-5
NHWD	kg	8.28E-2	1.05E-2	1.93E-3	9.52E-2	1.13E-2	6.52E-2	4.50E-2	-3.63E-2	1.81E-1
RWD	kg	4.95E-5	3.65E-6	2.47E-6	5.57E-5	1.24E-6	6.48E-6	6.64E-8	-1.94E-5	4.41E-5
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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