

Environmental Profile

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

Ecochain v3.5.71



Product: 3036766 - Wavin UR Bend 45° 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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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	1.44E+0	6.23E-2	1.24E-1	1.63E+0	1.93E-2	5.23E-1	6.03E-3	-8.04E-1	1.37E+0
GWP-f	kg CO2 eq	1.43E+0	6.23E-2	1.20E-1	1.61E+0	1.93E-2	5.24E-1	6.03E-3	-7.98E-1	1.36E+0
GWP-b	kg CO2 eq	1.27E-2	-1.34E-5	3.89E-3	1.66E-2	1.17E-5	-5.27E-4	7.59E-6	-5.64E-3	1.05E-2
GWP-luluc	kg CO2 eq	1.19E-3	4.10E-5	8.96E-5	1.32E-3	6.82E-6	2.38E-4	1.60E-7	-5.23E-4	1.04E-3
ODP	kg CFC11 eq	7.99E-7	1.27E-8	1.21E-8	8.24E-7	4.44E-9	6.50E-8	2.27E-10	-4.06E-7	4.87E-7
AP	mol H+ eq	6.63E-3	1.86E-3	6.20E-4	9.12E-3	1.10E-4	1.09E-3	5.51E-6	-3.05E-3	7.27E-3
EP-fw	kg P eq	6.53E-5	2.80E-7	1.63E-6	6.72E-5	1.59E-7	7.94E-6	7.23E-9	-2.98E-5	4.55E-5
EP-m	kg N eq	1.12E-3	4.62E-4	1.33E-4	1.71E-3	3.93E-5	2.63E-4	3.39E-6	-5.27E-4	1.49E-3
EP-T	mol N eq	1.22E-2	5.13E-3	1.42E-3	1.87E-2	4.33E-4	2.90E-3	2.20E-5	-5.60E-3	1.65E-2
POCP	kg NMVOC eq	4.12E-3	1.33E-3	6.66E-4	6.12E-3	1.24E-4	8.68E-4	7.56E-6	-1.94E-3	5.18E-3
ADP-mm	kg Sb eq	8.33E-4	5.74E-7	2.57E-6	8.36E-4	4.98E-7	4.32E-6	5.54E-9	-1.65E-5	8.24E-4
ADP-f	MJ	3.65E+1	8.11E-1	1.33E+0	3.86E+1	2.96E-1	2.99E+0	1.66E-2	-1.95E+1	2.24E+1
WDP	m3 depriv.	2.41E+0	1.33E-3	4.28E-2	2.46E+0	9.08E-4	1.20E-1	1.13E-4	-1.17E+0	1.41E+0
PM	disease inc.	4.29E-8	2.27E-9	4.14E-9	4.94E-8	1.74E-9	1.35E-8	1.14E-10	-1.93E-8	4.54E-8
IR	kBq U-235 eq	7.93E-2	3.49E-3	3.59E-3	8.63E-2	1.29E-3	1.05E-2	7.59E-5	-3.76E-2	6.07E-2
ETP-fw	CTUe	3.09E+1	5.38E-1	3.17E+0	3.46E+1	2.40E-1	2.33E+1	2.59E-1	-1.12E+1	4.73E+1
HTP-c	CTUh	1.11E-9	3.45E-11	1.25E-10	1.27E-9	8.55E-12	3.33E-10	4.59E-13	-4.27E-10	1.19E-9
HTP-nc	CTUh	3.58E-8	4.59E-10	8.23E-9	4.45E-8	2.86E-10	8.07E-9	4.97E-11	-1.48E-8	3.81E-8
SQP	Pt	4.69E+0	1.76E-1	4.24E-1	5.29E+0	2.53E-1	1.84E+0	4.23E-2	-2.07E+0	5.35E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.80E+0	6.17E-3	6.22E+0	8.02E+0	4.24E-3	2.18E-1	6.11E-4	-8.46E-1	7.40E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.80E+0	6.17E-3	6.22E+0	8.02E+0	4.24E-3	2.18E-1	6.11E-4	-8.46E-1	7.40E+0
PENRE	MJ	3.91E+1	8.61E-1	1.41E+0	4.14E+1	3.14E-1	3.18E+0	1.76E-2	-2.10E+1	2.39E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.91E+1	8.61E-1	1.41E+0	4.14E+1	3.14E-1	3.18E+0	1.76E-2	-2.10E+1	2.39E+1
PET	MJ	4.09E+1	8.68E-1	7.63E+0	4.94E+1	3.18E-1	3.40E+0	1.82E-2	-2.18E+1	3.13E+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	2.63E-2	4.79E-5	1.20E-3	2.75E-2	3.35E-5	3.26E-3	2.02E-5	-1.22E-2	1.87E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.29E-4	8.93E-7	1.50E-5	1.45E-4	7.56E-7	4.82E-6	2.02E-8	-1.61E-5	1.35E-4
NHWD	kg	1.41E-1	7.39E-3	3.02E-3	1.51E-1	1.83E-2	1.08E-1	7.33E-2	-6.20E-2	2.89E-1
RWD	kg	6.89E-5	5.63E-6	3.98E-6	7.85E-5	2.01E-6	1.12E-5	1.08E-7	-3.31E-5	5.87E-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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