

# Environmental Profile

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

Ecochain v3.5.71



Product: 3031913 - OsmaS PVCU Vent Cowl E 110  
Unit: 1 piece  
Manufacturer: Wavin - UK - Chippenham - Verified

The Wavin Osma soil range offers an exceptional choice of pipe & fittings including brackets, bends, junctions, access fittings, and terminations. To connect to your soil system, we offer push-fit & solvent weld waste ranges, together with trap, overflow & condensate ranges to cover all installation needs.

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<br>B6 Operational energy use B7 Operational water use |     |     |     |     |     |     | C1 De-construction demolition C2 Transport C3 Waste processing<br>C4 Disposal |    |    |    |   |
| Construction process stage                                                   |    |    |     |     |                                                                                                                       |     |     |     |     |     |     | Benefits and loads beyond the system boundaries                               |    |    |    |   |
| A4 Transport gate to site<br>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    | 7.70E-1 | 7.03E-3  | 5.57E-2  | 8.33E-1 | 9.35E-3  | 2.64E-1  | 4.24E-3  | -3.65E-1  | 7.45E-1  |
| GWP-f                | kg CO2 eq    | 7.40E-1 | 7.03E-3  | 5.39E-2  | 8.01E-1 | 9.34E-3  | 2.64E-1  | 4.24E-3  | -3.62E-1  | 7.16E-1  |
| GWP-b                | kg CO2 eq    | 2.75E-2 | 4.27E-6  | 1.77E-3  | 2.93E-2 | 5.67E-6  | -3.76E-4 | 3.08E-6  | -2.78E-3  | 2.62E-2  |
| GWP-luluc            | kg CO2 eq    | 2.47E-3 | 2.49E-6  | 3.98E-5  | 2.51E-3 | 3.31E-6  | 5.25E-5  | 1.72E-7  | -2.58E-4  | 2.31E-3  |
| ODP                  | kg CFC11 eq  | 5.90E-8 | 1.62E-9  | 5.47E-9  | 6.61E-8 | 2.15E-9  | 6.84E-9  | 1.16E-10 | -1.97E-7  | -1.22E-7 |
| AP                   | mol H+ eq    | 7.75E-3 | 4.00E-5  | 2.77E-4  | 8.06E-3 | 5.32E-5  | 2.79E-4  | 3.21E-6  | -1.49E-3  | 6.91E-3  |
| EP-fw                | kg P eq      | 8.34E-5 | 5.78E-8  | 7.29E-7  | 8.42E-5 | 7.69E-8  | 1.51E-6  | 6.49E-9  | -1.47E-5  | 7.11E-5  |
| EP-m                 | kg N eq      | 1.56E-3 | 1.43E-5  | 5.96E-5  | 1.63E-3 | 1.90E-5  | 7.95E-5  | 1.08E-6  | -2.53E-4  | 1.48E-3  |
| EP-T                 | mol N eq     | 1.95E-2 | 1.58E-4  | 6.37E-4  | 2.03E-2 | 2.10E-4  | 8.71E-4  | 1.19E-5  | -2.68E-3  | 1.87E-2  |
| POCP                 | kg NMVOC eq  | 4.42E-3 | 4.51E-5  | 3.00E-4  | 4.77E-3 | 6.00E-5  | 2.76E-4  | 4.35E-6  | -9.34E-4  | 4.17E-3  |
| ADP-mm               | kg Sb eq     | 1.71E-2 | 1.82E-7  | 1.14E-6  | 1.71E-2 | 2.42E-7  | 1.14E-6  | 4.01E-9  | -8.17E-6  | 1.71E-2  |
| ADP-f                | MJ           | 1.08E+1 | 1.08E-1  | 5.95E-1  | 1.15E+1 | 1.43E-1  | 9.16E-1  | 8.84E-3  | -9.09E+0  | 3.45E+0  |
| WDP                  | m3 depriv.   | 8.28E-1 | 3.31E-4  | 1.93E-2  | 8.47E-1 | 4.40E-4  | 1.68E-2  | 3.81E-4  | -5.75E-1  | 2.90E-1  |
| PM                   | disease inc. | 3.43E-8 | 6.34E-10 | 1.85E-9  | 3.68E-8 | 8.44E-10 | 4.66E-9  | 6.11E-11 | -9.48E-9  | 3.29E-8  |
| IR                   | kBq U-235 eq | 7.51E-2 | 4.72E-4  | 1.62E-3  | 7.72E-2 | 6.27E-4  | 2.75E-3  | 3.48E-5  | -1.84E-2  | 6.22E-2  |
| ETP-fw               | CTUe         | 1.63E+2 | 8.76E-2  | 1.41E+0  | 1.64E+2 | 1.16E-1  | 1.03E+0  | 7.32E-3  | -5.49E+0  | 1.60E+2  |
| HTP-c                | CTUh         | 3.87E-9 | 3.12E-12 | 5.55E-11 | 3.93E-9 | 4.14E-12 | 3.15E-10 | 4.66E-13 | -2.09E-10 | 4.04E-9  |
| HTP-nc               | CTUh         | 1.14E-7 | 1.04E-10 | 3.72E-9  | 1.18E-7 | 1.39E-10 | 2.02E-9  | 6.26E-12 | -7.28E-9  | 1.13E-7  |
| SQP                  | Pt           | 6.24E+0 | 9.23E-2  | 1.89E-1  | 6.52E+0 | 1.23E-1  | 7.30E-1  | 2.11E-2  | -1.01E+0  | 6.39E+0  |
| Resource use         | Unit         | A1      | A2       | A3       | A1-A3   | C2       | C3       | C4       | D         | Total    |
| PERE                 | MJ           | 1.57E+0 | 1.55E-3  | 2.75E+0  | 4.32E+0 | 2.06E-3  | 4.48E-2  | 1.53E-4  | -4.17E-1  | 3.95E+0  |
| PERM                 | MJ           | 0       | 0        | 0        | 0       | 0        | 0        | 0        | 0         | 0        |
| PERT                 | MJ           | 1.57E+0 | 1.55E-3  | 2.75E+0  | 4.32E+0 | 2.06E-3  | 4.48E-2  | 1.53E-4  | -4.17E-1  | 3.95E+0  |
| PENRE                | MJ           | 1.15E+1 | 1.15E-1  | 6.32E-1  | 1.22E+1 | 1.52E-1  | 9.77E-1  | 9.39E-3  | -9.77E+0  | 3.57E+0  |
| PENRM                | MJ           | 0       | 0        | 0        | 0       | 0        | 0        | 0        | 0         | 0        |
| PENRT                | MJ           | 1.15E+1 | 1.15E-1  | 6.32E-1  | 1.22E+1 | 1.52E-1  | 9.77E-1  | 9.39E-3  | -9.77E+0  | 3.57E+0  |
| PET                  | MJ           | 1.30E+1 | 1.16E-1  | 3.38E+0  | 1.65E+1 | 1.54E-1  | 1.02E+0  | 9.55E-3  | -1.02E+1  | 7.52E+0  |
| 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           | 2.44E-2 | 1.22E-5  | 5.41E-4  | 2.50E-2 | 1.62E-5  | 5.01E-4  | 9.28E-6  | -5.98E-3  | 1.95E-2  |

| Output flows and waste categories | Unit | A1      | A2      | A3      | A1-A3   | C2      | C3      | C4      | D        | Total   |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD                               | kg   | 2.17E-3 | 2.76E-7 | 6.83E-6 | 2.18E-3 | 3.67E-7 | 1.66E-6 | 1.36E-8 | -7.32E-6 | 2.17E-3 |
| NHWD                              | kg   | 1.40E-1 | 6.69E-3 | 1.37E-3 | 1.48E-1 | 8.89E-3 | 4.66E-2 | 3.56E-2 | -3.05E-2 | 2.08E-1 |
| RWD                               | kg   | 5.48E-5 | 7.34E-7 | 1.81E-6 | 5.73E-5 | 9.75E-7 | 3.49E-6 | 5.30E-8 | -1.61E-5 | 4.57E-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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