

# Environmental Profile

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

Ecochain v3.5.71



Product: 3035958 - OsmaS PVCU Access Saddle BK 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    | 1.78E+0 | 7.26E-2  | 5.57E-2  | 1.91E+0 | 2.23E-2  | 6.39E-1  | 6.99E-3  | -9.72E-1  | 1.60E+0 |
| GWP-f                | kg CO2 eq    | 1.76E+0 | 7.26E-2  | 5.45E-2  | 1.89E+0 | 2.23E-2  | 6.39E-1  | 6.98E-3  | -9.65E-1  | 1.59E+0 |
| GWP-b                | kg CO2 eq    | 1.41E-2 | -1.48E-5 | 1.16E-3  | 1.52E-2 | 1.35E-5  | -6.50E-4 | 8.77E-6  | -6.27E-3  | 8.34E-3 |
| GWP-luluc            | kg CO2 eq    | 1.47E-3 | 4.75E-5  | 4.97E-5  | 1.57E-3 | 7.89E-6  | 2.75E-4  | 1.86E-7  | -5.87E-4  | 1.26E-3 |
| ODP                  | kg CFC11 eq  | 9.35E-7 | 1.48E-8  | 4.55E-9  | 9.55E-7 | 5.13E-9  | 7.53E-8  | 2.62E-10 | -4.71E-7  | 5.64E-7 |
| AP                   | mol H+ eq    | 8.18E-3 | 2.15E-3  | 3.03E-4  | 1.06E-2 | 1.27E-4  | 1.28E-3  | 6.38E-6  | -3.63E-3  | 8.41E-3 |
| EP-fw                | kg P eq      | 8.10E-5 | 3.30E-7  | 7.69E-7  | 8.21E-5 | 1.83E-7  | 9.22E-6  | 8.38E-9  | -3.53E-5  | 5.62E-5 |
| EP-m                 | kg N eq      | 1.39E-3 | 5.33E-4  | 5.69E-5  | 1.98E-3 | 4.54E-5  | 3.10E-4  | 3.92E-6  | -6.30E-4  | 1.71E-3 |
| EP-T                 | mol N eq     | 1.50E-2 | 5.93E-3  | 6.25E-4  | 2.16E-2 | 5.00E-4  | 3.41E-3  | 2.54E-5  | -6.72E-3  | 1.88E-2 |
| POCP                 | kg NMVOC eq  | 5.22E-3 | 1.54E-3  | 2.63E-4  | 7.02E-3 | 1.43E-4  | 1.02E-3  | 8.74E-6  | -2.40E-3  | 5.80E-3 |
| ADP-mm               | kg Sb eq     | 1.00E-3 | 6.86E-7  | 1.44E-6  | 1.01E-3 | 5.76E-7  | 5.05E-6  | 6.42E-9  | -1.92E-5  | 9.93E-4 |
| ADP-f                | MJ           | 4.46E+1 | 9.48E-1  | 6.03E-1  | 4.61E+1 | 3.42E-1  | 3.48E+0  | 1.92E-2  | -2.30E+1  | 2.70E+1 |
| WDP                  | m3 depriv.   | 2.82E+0 | 1.58E-3  | 1.76E-2  | 2.84E+0 | 1.05E-3  | 1.38E-1  | 1.33E-4  | -1.35E+0  | 1.62E+0 |
| PM                   | disease inc. | 5.75E-8 | 2.70E-9  | 2.09E-9  | 6.23E-8 | 2.01E-9  | 1.58E-8  | 1.32E-10 | -2.38E-8  | 5.65E-8 |
| IR                   | kBq U-235 eq | 9.93E-2 | 4.08E-3  | 1.41E-3  | 1.05E-1 | 1.50E-3  | 1.23E-2  | 8.78E-5  | -4.31E-2  | 7.55E-2 |
| ETP-fw               | CTUe         | 3.90E+1 | 6.31E-1  | 1.66E+0  | 4.13E+1 | 2.78E-1  | 2.69E+1  | 2.98E-1  | -1.38E+1  | 5.50E+1 |
| HTP-c                | CTUh         | 1.76E-9 | 4.02E-11 | 6.50E-11 | 1.87E-9 | 9.88E-12 | 3.92E-10 | 5.32E-13 | -4.97E-10 | 1.77E-9 |
| HTP-nc               | CTUh         | 4.72E-8 | 5.43E-10 | 3.15E-9  | 5.09E-8 | 3.31E-10 | 9.40E-9  | 5.73E-11 | -1.25E-8  | 4.83E-8 |
| SQP                  | Pt           | 5.70E+0 | 2.16E-1  | 2.14E-1  | 6.13E+0 | 2.93E-1  | 2.16E+0  | 4.89E-2  | -2.44E+0  | 6.19E+0 |
| Resource use         | Unit         | A1      | A2       | A3       | A1-A3   | C2       | C3       | C4       | D         | Total   |
| PERE                 | MJ           | 2.22E+0 | 7.31E-3  | 3.55E+0  | 5.78E+0 | 4.91E-3  | 2.53E-1  | 7.05E-4  | -9.73E-1  | 5.06E+0 |
| PERM                 | MJ           | 0       | 0        | 0        | 0       | 0        | 0        | 0        | 0         | 0       |
| PERT                 | MJ           | 2.22E+0 | 7.31E-3  | 3.55E+0  | 5.78E+0 | 4.91E-3  | 2.53E-1  | 7.05E-4  | -9.73E-1  | 5.06E+0 |
| PENRE                | MJ           | 4.78E+1 | 1.01E+0  | 6.40E-1  | 4.94E+1 | 3.63E-1  | 3.70E+0  | 2.03E-2  | -2.48E+1  | 2.88E+1 |
| PENRM                | MJ           | 0       | 0        | 0        | 0       | 0        | 0        | 0        | 0         | 0       |
| PENRT                | MJ           | 4.78E+1 | 1.01E+0  | 6.40E-1  | 4.94E+1 | 3.63E-1  | 3.70E+0  | 2.03E-2  | -2.48E+1  | 2.88E+1 |
| PET                  | MJ           | 5.00E+1 | 1.01E+0  | 4.19E+0  | 5.52E+1 | 3.68E-1  | 3.96E+0  | 2.10E-2  | -2.57E+1  | 3.38E+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           | 3.15E-2 | 5.68E-5  | 5.24E-4  | 3.20E-2 | 3.87E-5  | 3.78E-3  | 2.34E-5  | -1.42E-2  | 2.17E-2 |

| Output flows and waste categories | Unit | A1      | A2      | A3      | A1-A3   | C2      | C3      | C4      | D        | Total   |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD                               | kg   | 1.58E-4 | 1.07E-6 | 4.65E-6 | 1.64E-4 | 8.75E-7 | 5.65E-6 | 2.34E-8 | -2.19E-5 | 1.49E-4 |
| NHWD                              | kg   | 1.81E-1 | 9.44E-3 | 9.70E-4 | 1.92E-1 | 2.12E-2 | 1.28E-1 | 8.48E-2 | -7.41E-2 | 3.52E-1 |
| RWD                               | kg   | 8.86E-5 | 6.58E-6 | 1.23E-6 | 9.64E-5 | 2.33E-6 | 1.31E-5 | 1.25E-7 | -3.82E-5 | 7.37E-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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