

# Environmental Profile

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

Ecochain v4.3.1



Product: 4055558 - Wavin XL Pipe BK 2400 SN4 L=6 S/SP Ring  
Unit: 1 piece  
Manufacturer: Wavin - SE - Eskilstuna - KRAH pipes

LCA standard: EN15804+A2 (2019)  
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off  
Externally verified: Yes  
Issue date: 29-11-2024  
End of validity: 29-11-2029  
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 - SE - Eskilstuna - KRAH pipes (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 | 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]; **PENRT** = 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       | A1-A3    | Total    |
|----------------------|--------------|----------|----------|----------|
| GWP-total            | kg CO2 eq    | 5.398E+3 | 5.398E+3 | 5.398E+3 |
| GWP-f                | kg CO2 eq    | 5.330E+3 | 5.330E+3 | 5.330E+3 |
| GWP-b                | kg CO2 eq    | 4.732E+1 | 4.732E+1 | 4.732E+1 |
| GWP-luluc            | kg CO2 eq    | 2.338E+0 | 2.338E+0 | 2.338E+0 |
| ODP                  | kg CFC11 eq  | 4.481E-4 | 4.481E-4 | 4.481E-4 |
| AP                   | mol H+ eq    | 2.073E+1 | 2.073E+1 | 2.073E+1 |
| EP-fw                | kg P eq      | 7.589E-2 | 7.589E-2 | 7.589E-2 |
| EP-m                 | kg N eq      | 6.000E+0 | 6.000E+0 | 6.000E+0 |
| EP-T                 | mol N eq     | 6.538E+1 | 6.538E+1 | 6.538E+1 |
| POCP                 | kg NMVOC eq  | 2.081E+1 | 2.081E+1 | 2.081E+1 |
| ADP-mm               | kg Sb eq     | 6.190E-2 | 6.190E-2 | 6.190E-2 |
| ADP-f                | MJ           | 8.946E+4 | 8.946E+4 | 8.946E+4 |
| WDP                  | m3 depriv.   | 4.508E+3 | 4.508E+3 | 4.508E+3 |
| PM                   | disease inc. | 1.449E-4 | 1.449E-4 | 1.449E-4 |
| IR                   | kBq U-235 eq | 1.089E+2 | 1.089E+2 | 1.089E+2 |
| ETP-fw               | CTUe         | 4.277E+4 | 4.277E+4 | 4.277E+4 |
| HTP-c                | CTUh         | 1.148E-6 | 1.148E-6 | 1.148E-6 |
| HTP-nc               | CTUh         | 3.260E-5 | 3.260E-5 | 3.260E-5 |
| SQP                  | Pt           | 3.795E+3 | 3.795E+3 | 3.795E+3 |
| Resource use         | Unit         | A1       | A1-A3    | Total    |
| PERE                 | MJ           | 2.502E+3 | 2.502E+3 | 2.502E+3 |
| PERM                 | MJ           | 8.465E+2 | 8.465E+2 | 8.465E+2 |
| PERT                 | MJ           | 3.348E+3 | 3.348E+3 | 3.348E+3 |
| PENRE                | MJ           | 5.471E+4 | 5.471E+4 | 5.471E+4 |
| PENRM                | MJ           | 1.751E+4 | 1.751E+4 | 1.751E+4 |
| PENRT                | MJ           | 7.222E+4 | 7.222E+4 | 7.222E+4 |
| PET                  | MJ           | 7.557E+4 | 7.557E+4 | 7.557E+4 |
| SM                   | kg           | 1.086E+3 | 1.086E+3 | 1.086E+3 |
| RSF                  | MJ           | 0        | 0        | 0        |
| NRSF                 | MJ           | 0        | 0        | 0        |
| FW                   | m3           | 8.462E+1 | 8.462E+1 | 8.462E+1 |

| Output flows and waste categories | Unit | A1       | A1-A3    | Total    |
|-----------------------------------|------|----------|----------|----------|
| HWD                               | kg   | 9.550E+1 | 9.550E+1 | 9.550E+1 |
| NHWD                              | kg   | 3.954E+3 | 3.954E+3 | 3.954E+3 |
| RWD                               | kg   | 2.183E-1 | 2.183E-1 | 2.183E-1 |
| CRU                               | kg   | 0        | 0        | 0        |
| MFR                               | kg   | 1.262E+3 | 1.262E+3 | 1.262E+3 |
| MER                               | kg   | 4.126E+2 | 4.126E+2 | 4.126E+2 |
| EE                                | MJ   | 5.858E+3 | 5.858E+3 | 5.858E+3 |
| EET                               | MJ   | 3.706E+3 | 3.706E+3 | 3.706E+3 |
| EEE                               | MJ   | 2.152E+3 | 2.152E+3 | 2.152E+3 |



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