

# Environmental Profile

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

Ecochain v3.5.80



Product: 3024002 - KANION PVC Angle int. 130x135 BK  
Unit: 1 piece  
Manufacturer: Wavin - PL -Buk - Extra products

Kanion gutters mean original design, elegance and aesthetics. They are designed to drain 100% of rainwater. It is safe to say that they are intended for the most demanding users.

LCA standard: EN15804+A2 (2019)  
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off  
Externally verified: Yes  
Issue date: 08-06-2023  
End of validity: 08-06-2028  
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 - PL -Buk - Extra products (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    | 1.61E+0  | 1.95E-2  | 8.05E-5  | 1.62E+0  | 8.40E-3  | 1.31E+0  | 2.77E-3  | -1.37E-1  | 2.81E+0  |
| GWP-f                | kg CO2 eq    | 1.94E+0  | 1.94E-2  | 8.13E-5  | 1.96E+0  | 8.39E-3  | 5.37E-1  | 2.77E-3  | -1.06E+0  | 1.45E+0  |
| GWP-b                | kg CO2 eq    | -3.46E-1 | 1.18E-5  | -8.58E-7 | -3.46E-1 | 5.09E-6  | 7.74E-1  | 3.38E-6  | 9.32E-1   | 1.36E+0  |
| GWP-luluc            | kg CO2 eq    | 6.23E-3  | 6.88E-6  | 8.31E-8  | 6.23E-3  | 2.97E-6  | 1.29E-4  | 7.48E-8  | -6.90E-3  | -5.37E-4 |
| ODP                  | kg CFC11 eq  | 4.88E-7  | 4.48E-9  | 4.60E-12 | 4.93E-7  | 1.93E-9  | 4.16E-8  | 1.01E-10 | -2.66E-7  | 2.70E-7  |
| AP                   | mol H+ eq    | 9.77E-3  | 1.11E-4  | 8.20E-7  | 9.88E-3  | 4.78E-5  | 9.75E-4  | 2.47E-6  | -6.22E-3  | 4.68E-3  |
| EP-fw                | kg P eq      | 1.02E-4  | 1.60E-7  | 4.58E-9  | 1.02E-4  | 6.90E-8  | 4.48E-6  | 3.33E-9  | -9.71E-5  | 9.98E-6  |
| EP-m                 | kg N eq      | 2.53E-3  | 3.96E-5  | 8.63E-8  | 2.57E-3  | 1.71E-5  | 3.04E-4  | 1.57E-6  | -1.38E-3  | 1.51E-3  |
| EP-T                 | mol N eq     | 2.53E-2  | 4.37E-4  | 1.03E-6  | 2.58E-2  | 1.88E-4  | 3.32E-3  | 9.81E-6  | -1.58E-2  | 1.35E-2  |
| POCP                 | kg NMVOC eq  | 7.03E-3  | 1.25E-4  | 3.49E-7  | 7.15E-3  | 5.39E-5  | 9.92E-4  | 3.39E-6  | -4.34E-3  | 3.86E-3  |
| ADP-mm               | kg Sb eq     | 9.54E-4  | 5.03E-7  | 1.09E-8  | 9.55E-4  | 2.17E-7  | 3.91E-6  | 2.51E-9  | -1.46E-5  | 9.44E-4  |
| ADP-f                | MJ           | 3.85E+1  | 2.99E-1  | 7.55E-4  | 3.88E+1  | 1.29E-1  | 2.22E+0  | 7.38E-3  | -2.05E+1  | 2.07E+1  |
| WDP                  | m3 depriv.   | 1.56E+0  | 9.16E-4  | 2.90E-5  | 1.56E+0  | 3.95E-4  | 5.87E-2  | 6.14E-5  | -1.88E+0  | -2.56E-1 |
| PM                   | disease inc. | 1.16E-7  | 1.76E-9  | 5.05E-12 | 1.18E-7  | 7.57E-10 | 1.32E-8  | 5.08E-11 | -1.04E-7  | 2.78E-8  |
| IR                   | kBq U-235 eq | 9.27E-2  | 1.30E-3  | 5.66E-7  | 9.40E-2  | 5.63E-4  | 8.60E-3  | 3.37E-5  | -7.70E-2  | 2.63E-2  |
| ETP-fw               | CTUe         | 1.42E+2  | 2.42E-1  | 6.72E-3  | 1.42E+2  | 1.05E-1  | 1.17E+1  | 1.10E-1  | -7.78E+1  | 7.62E+1  |
| HTP-c                | CTUh         | 1.62E-9  | 8.63E-12 | 3.43E-13 | 1.63E-9  | 3.72E-12 | 3.12E-10 | 2.13E-13 | -8.73E-10 | 1.07E-9  |
| HTP-nc               | CTUh         | 3.95E-8  | 2.89E-10 | 8.71E-12 | 3.98E-8  | 1.25E-10 | 5.25E-9  | 2.13E-11 | -2.30E-8  | 2.22E-8  |
| SQP                  | Pt           | 7.18E+1  | 2.55E-1  | 1.25E-3  | 7.20E+1  | 1.10E-1  | 1.34E+0  | 1.88E-2  | -1.94E+2  | -1.21E+2 |
| Resource use         | Unit         | A1       | A2       | A3       | A1-A3    | C2       | C3       | C4       | D         | Total    |
| PERE                 | MJ           | 1.34E+1  | 4.28E-3  | 1.34E-2  | 1.34E+1  | 1.85E-3  | 1.22E-1  | 2.69E-4  | -3.46E+1  | -2.11E+1 |
| PERM                 | MJ           | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0        |
| PERT                 | MJ           | 1.34E+1  | 4.28E-3  | 1.34E-2  | 1.34E+1  | 1.85E-3  | 1.22E-1  | 2.69E-4  | -3.46E+1  | -2.11E+1 |
| PENRE                | MJ           | 4.14E+1  | 3.17E-1  | 8.03E-4  | 4.17E+1  | 1.37E-1  | 2.35E+0  | 7.83E-3  | -2.19E+1  | 2.23E+1  |
| PENRM                | MJ           | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0        |
| PENRT                | MJ           | 4.14E+1  | 3.17E-1  | 8.03E-4  | 4.17E+1  | 1.37E-1  | 2.35E+0  | 7.83E-3  | -2.19E+1  | 2.23E+1  |
| PET                  | MJ           | 5.48E+1  | 3.21E-1  | 1.42E-2  | 5.51E+1  | 1.39E-1  | 2.48E+0  | 8.10E-3  | -5.65E+1  | 1.20E+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           | 2.86E-2  | 3.38E-5  | 8.12E-7  | 2.87E-2  | 1.46E-5  | 1.81E-3  | 8.97E-6  | -4.10E-2  | -1.05E-2 |

| Output flows and waste categories | Unit | A1      | A2      | A3       | A1-A3   | C2      | C3      | C4      | D        | Total   |
|-----------------------------------|------|---------|---------|----------|---------|---------|---------|---------|----------|---------|
| HWD                               | kg   | 1.53E-4 | 7.63E-7 | 1.52E-13 | 1.54E-4 | 3.29E-7 | 4.61E-6 | 9.10E-9 | -2.55E-5 | 1.34E-4 |
| NHWD                              | kg   | 2.82E-1 | 1.85E-2 | 5.86E-7  | 3.01E-1 | 7.98E-3 | 9.65E-2 | 3.23E-2 | -1.18E-1 | 3.20E-1 |
| RWD                               | kg   | 9.26E-5 | 2.03E-6 | 6.10E-14 | 9.46E-5 | 8.76E-7 | 1.07E-5 | 4.78E-8 | -7.31E-5 | 3.32E-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       |



Ecochain Technologies BV  
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands  
<https://www.ecochain.com>  
+31 20 3035 777