

# Environmental Profile

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

Ecochain v3.5.80



Product: 4040659 - Wavin R600 IC E-Base Bent 30 BK 300  
Unit: 1 piece  
Manufacturer: Wavin - PL -Buk - Extra products

Wavin offers Inspection Chambers in 315, 450 and 600mm diameters, approved to BS EN 13598-2 for deep applications. They are suitable for use in both adoptable and non-adoptable applications to a maximum depth of 3 metres, depending on the chamber and the application. There is also a 200mm diameter Inspection Chamber approved to BS EN 13598-1.

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

This document and supporting material contain confidential and proprietary business information of Wavin - PL -Buk - Extra products. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - PL -Buk - Extra products.

# Results

| Environmental impact | Unit         | A1       | A2       | A3       | A1-A3    | C2       | C3      | C4       | D        | Total   |
|----------------------|--------------|----------|----------|----------|----------|----------|---------|----------|----------|---------|
| GWP-total            | kg CO2 eq    | 4.63E+1  | 1.80E+0  | 2.18E-1  | 4.83E+1  | 8.41E-1  | 6.16E+1 | 4.08E-1  | -4.39E+1 | 6.72E+1 |
| GWP-f                | kg CO2 eq    | 7.70E+1  | 1.80E+0  | 2.20E-1  | 7.90E+1  | 8.40E-1  | 3.06E+1 | 4.08E-1  | -4.38E+1 | 6.70E+1 |
| GWP-b                | kg CO2 eq    | -3.07E+1 | 1.09E-3  | -2.32E-3 | -3.07E+1 | 5.10E-4  | 3.10E+1 | 3.58E-4  | -1.31E-1 | 2.01E-1 |
| GWP-luluc            | kg CO2 eq    | 3.92E-2  | 6.38E-4  | 2.25E-4  | 4.00E-2  | 2.97E-4  | 4.68E-3 | 7.10E-6  | -2.10E-2 | 2.40E-2 |
| ODP                  | kg CFC11 eq  | 4.19E-6  | 4.15E-7  | 1.24E-8  | 4.61E-6  | 1.94E-7  | 6.43E-7 | 1.03E-8  | -2.50E-6 | 2.96E-6 |
| AP                   | mol H+ eq    | 3.03E-1  | 1.03E-2  | 2.22E-3  | 3.15E-1  | 4.79E-3  | 2.75E-2 | 2.47E-4  | -1.34E-1 | 2.13E-1 |
| EP-fw                | kg P eq      | 1.41E-3  | 1.48E-5  | 1.24E-5  | 1.44E-3  | 6.91E-6  | 1.36E-4 | 3.24E-7  | -6.16E-4 | 9.63E-4 |
| EP-m                 | kg N eq      | 5.31E-2  | 3.67E-3  | 2.34E-4  | 5.70E-2  | 1.71E-3  | 8.23E-3 | 1.82E-4  | -2.65E-2 | 4.07E-2 |
| EP-T                 | mol N eq     | 6.00E-1  | 4.05E-2  | 2.79E-3  | 6.44E-1  | 1.89E-2  | 9.08E-2 | 1.00E-3  | -3.00E-1 | 4.54E-1 |
| POCP                 | kg NMVOC eq  | 2.65E-1  | 1.16E-2  | 9.45E-4  | 2.77E-1  | 5.40E-3  | 2.81E-2 | 3.74E-4  | -1.27E-1 | 1.84E-1 |
| ADP-mm               | kg Sb eq     | 3.51E-3  | 4.66E-5  | 2.96E-5  | 3.58E-3  | 2.17E-5  | 1.04E-4 | 2.49E-7  | -4.04E-4 | 3.30E-3 |
| ADP-f                | MJ           | 2.53E+3  | 2.77E+1  | 2.04E+0  | 2.56E+3  | 1.29E+1  | 8.27E+1 | 7.53E-1  | -1.29E+3 | 1.37E+3 |
| WDP                  | m3 depriv.   | 4.93E+1  | 8.49E-2  | 7.85E-2  | 4.95E+1  | 3.96E-2  | 1.64E+0 | 4.10E-3  | -2.24E+1 | 2.88E+1 |
| PM                   | disease inc. | 3.34E-6  | 1.63E-7  | 1.37E-8  | 3.51E-6  | 7.59E-8  | 4.34E-7 | 5.17E-9  | -1.41E-6 | 2.62E-6 |
| IR                   | kBq U-235 eq | 2.13E+0  | 1.21E-1  | 1.53E-3  | 2.25E+0  | 5.64E-2  | 2.53E-1 | 3.50E-3  | -7.81E-1 | 1.79E+0 |
| ETP-fw               | CTUe         | 6.69E+2  | 2.25E+1  | 1.82E+1  | 7.10E+2  | 1.05E+1  | 1.02E+2 | 6.99E-1  | -2.82E+2 | 5.41E+2 |
| HTP-c                | CTUh         | 3.43E-8  | 7.99E-10 | 9.28E-10 | 3.60E-8  | 3.73E-10 | 1.18E-8 | 1.87E-11 | -1.66E-8 | 3.16E-8 |
| HTP-nc               | CTUh         | 6.59E-7  | 2.68E-8  | 2.36E-8  | 7.10E-7  | 1.25E-8  | 1.43E-7 | 4.24E-10 | -2.79E-7 | 5.86E-7 |
| SQP                  | Pt           | 2.76E+3  | 2.37E+1  | 3.37E+0  | 2.79E+3  | 1.10E+1  | 6.56E+1 | 1.93E+0  | -1.98E+3 | 8.82E+2 |
| Resource use         | Unit         | A1       | A2       | A3       | A1-A3    | C2       | C3      | C4       | D        | Total   |
| PERE                 | MJ           | 5.18E+2  | 3.97E-1  | 3.62E+1  | 5.54E+2  | 1.85E-1  | 4.03E+0 | 2.94E-2  | -3.12E+2 | 2.47E+2 |
| PERM                 | MJ           | 0        | 0        | 0        | 0        | 0        | 0       | 0        | 0        | 0       |
| PERT                 | MJ           | 5.18E+2  | 3.97E-1  | 3.62E+1  | 5.54E+2  | 1.85E-1  | 4.03E+0 | 2.94E-2  | -3.12E+2 | 2.47E+2 |
| PENRE                | MJ           | 2.71E+3  | 2.94E+1  | 2.17E+0  | 2.74E+3  | 1.37E+1  | 8.81E+1 | 7.99E-1  | -1.39E+3 | 1.46E+3 |
| PENRM                | MJ           | 0        | 0        | 0        | 0        | 0        | 0       | 0        | 0        | 0       |
| PENRT                | MJ           | 2.71E+3  | 2.94E+1  | 2.17E+0  | 2.74E+3  | 1.37E+1  | 8.81E+1 | 7.99E-1  | -1.39E+3 | 1.46E+3 |
| PET                  | MJ           | 3.23E+3  | 2.98E+1  | 3.84E+1  | 3.30E+3  | 1.39E+1  | 9.21E+1 | 8.28E-1  | -1.70E+3 | 1.70E+3 |
| 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           | 8.17E-1  | 3.13E-3  | 2.20E-3  | 8.22E-1  | 1.46E-3  | 5.55E-2 | 9.27E-4  | -3.48E-1 | 5.32E-1 |

| Output flows and waste categories | Unit | A1      | A2      | A3       | A1-A3   | C2      | C3      | C4      | D        | Total   |
|-----------------------------------|------|---------|---------|----------|---------|---------|---------|---------|----------|---------|
| HWD                               | kg   | 6.39E-4 | 7.07E-5 | 4.11E-10 | 7.09E-4 | 3.30E-5 | 1.40E-4 | 9.09E-7 | -4.86E-4 | 3.97E-4 |
| NHWD                              | kg   | 4.61E+0 | 1.71E+0 | 1.59E-3  | 6.32E+0 | 7.99E-1 | 4.27E+0 | 3.31E+0 | -2.05E+0 | 1.27E+1 |
| RWD                               | kg   | 2.33E-3 | 1.88E-4 | 1.65E-10 | 2.52E-3 | 8.77E-5 | 3.22E-4 | 4.91E-6 | -7.66E-4 | 2.16E-3 |
| 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