

# Environmental Profile

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

Ecochain v4.3.1



Product: 3050915 - PPr Socket WT 50  
Unit: 1 piece  
Manufacturer: Wavin - TR - Adana  
Location: Güzelevler Mahallesi  
Address: Girne Bulvarı 294  
01321 Adana  
Turkey

LCA standard: EN15804+A2 (2019)  
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off  
Externally verified: Yes  
Issue date: 04-10-2022  
End of validity: 04-10-2027  
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 - TR - Adana (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-f** = EF Resource use, fossils [MJ]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **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

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

# Results

| Environmental impact | Unit         | A1       | A2       | A3       | A1-A3    | C2       | C3       | C4       | D         | Total    |
|----------------------|--------------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|
| GWP-total            | kg CO2 eq    | 1.88E-1  | 1.28E-2  | 4.74E-3  | 2.05E-1  | 4.11E-3  | 1.57E-1  | 1.93E-3  | -1.01E-1  | 2.67E-1  |
| GWP-f                | kg CO2 eq    | 1.87E-1  | 1.28E-2  | 4.57E-3  | 2.05E-1  | 4.11E-3  | 1.50E-1  | 1.93E-3  | -1.09E-1  | 2.52E-1  |
| GWP-b                | kg CO2 eq    | 1.63E-4  | -1.98E-6 | 1.60E-4  | 3.21E-4  | 2.49E-6  | 6.99E-3  | 1.68E-6  | 7.85E-3   | 1.52E-2  |
| GWP-luluc            | kg CO2 eq    | 2.51E-4  | 8.04E-6  | 2.79E-6  | 2.61E-4  | 1.45E-6  | 2.37E-5  | 3.41E-8  | -7.59E-5  | 2.11E-4  |
| ODP                  | kg CFC11 eq  | 5.58E-9  | 2.63E-9  | 3.67E-10 | 8.57E-9  | 9.46E-10 | 3.30E-9  | 4.86E-11 | -5.03E-9  | 7.83E-9  |
| AP                   | mol H+ eq    | 8.74E-4  | 3.49E-4  | 2.91E-5  | 1.25E-3  | 2.34E-5  | 1.38E-4  | 1.16E-6  | -3.14E-4  | 1.10E-3  |
| EP-fw                | kg P eq      | 3.82E-6  | 6.65E-8  | 3.65E-7  | 4.25E-6  | 3.38E-8  | 6.89E-7  | 1.55E-9  | -1.78E-6  | 3.20E-6  |
| EP-m                 | kg N eq      | 1.32E-4  | 8.74E-5  | 1.01E-5  | 2.29E-4  | 8.37E-6  | 4.15E-5  | 7.46E-7  | -5.84E-5  | 2.21E-4  |
| EP-T                 | mol N eq     | 1.42E-3  | 9.71E-4  | 6.87E-5  | 2.46E-3  | 9.22E-5  | 4.56E-4  | 4.72E-6  | -6.51E-4  | 2.36E-3  |
| POCP                 | kg NMVOC eq  | 6.13E-4  | 2.53E-4  | 2.24E-5  | 8.88E-4  | 2.64E-5  | 1.43E-4  | 1.77E-6  | -2.76E-4  | 7.84E-4  |
| ADP-f                | MJ           | 6.16E+0  | 1.70E-1  | 4.54E-2  | 6.37E+0  | 6.30E-2  | 4.21E-1  | 3.55E-3  | -3.24E+0  | 3.62E+0  |
| ADP-mm               | kg Sb eq     | 2.40E-6  | 1.41E-7  | 3.63E-7  | 2.90E-6  | 1.06E-7  | 5.40E-7  | 1.18E-9  | -6.91E-7  | 2.86E-6  |
| WDP                  | m3 depriv.   | 1.35E-1  | 3.26E-4  | 9.44E-3  | 1.45E-1  | 1.93E-4  | 8.05E-3  | 2.20E-5  | -6.44E-2  | 8.84E-2  |
| PM                   | disease inc. | 6.76E-9  | 5.42E-10 | 4.00E-10 | 7.70E-9  | 3.71E-10 | 2.24E-9  | 2.44E-11 | -3.04E-9  | 7.30E-9  |
| IR                   | kBq U-235 eq | 4.15E-3  | 7.24E-4  | 1.36E-4  | 5.01E-3  | 2.76E-4  | 1.29E-3  | 1.64E-5  | -1.95E-3  | 4.65E-3  |
| ETP-fw               | CTUe         | 2.34E+0  | 1.19E-1  | 2.46E-1  | 2.70E+0  | 5.12E-2  | 4.91E-1  | 2.97E-3  | -1.00E+0  | 2.25E+0  |
| HTP-c                | CTUh         | 7.69E-11 | 6.94E-12 | 1.50E-11 | 9.88E-11 | 1.82E-12 | 6.28E-11 | 8.99E-14 | -2.13E-11 | 1.42E-10 |
| HTP-nc               | CTUh         | 1.55E-9  | 1.05E-10 | 2.64E-10 | 1.92E-9  | 6.10E-11 | 7.36E-10 | 1.93E-12 | -6.21E-10 | 2.10E-9  |
| SQP                  | Pt           | 6.89E-1  | 4.98E-2  | 6.07E-2  | 7.99E-1  | 5.39E-2  | 3.33E-1  | 9.10E-3  | -1.55E+0  | -3.58E-1 |
| Resource use         | Unit         | A1       | A2       | A3       | A1-A3    | C2       | C3       | C4       | D         | Total    |
| PERE                 | MJ           | 1.84E-1  | 1.33E-3  | 8.26E-1  | 1.01E+0  | 9.04E-4  | 2.04E-2  | 1.35E-4  | -3.04E-1  | 7.28E-1  |
| PERM                 | MJ           | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0        |
| PERT                 | MJ           | 1.84E-1  | 1.33E-3  | 8.26E-1  | 1.01E+0  | 9.04E-4  | 2.04E-2  | 1.35E-4  | -3.04E-1  | 7.28E-1  |
| PENRE                | MJ           | 6.60E+0  | 1.80E-1  | 4.83E-2  | 6.83E+0  | 6.69E-2  | 4.48E-1  | 3.77E-3  | -3.49E+0  | 3.86E+0  |
| PENRM                | MJ           | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0        |
| PENRT                | MJ           | 6.60E+0  | 1.80E-1  | 4.83E-2  | 6.83E+0  | 6.69E-2  | 4.48E-1  | 3.77E-3  | -3.49E+0  | 3.86E+0  |
| PET                  | MJ           | 6.79E+0  | 1.82E-1  | 8.74E-1  | 7.84E+0  | 6.78E-2  | 4.69E-1  | 3.91E-3  | -3.80E+0  | 4.59E+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           | 2.31E-3  | 1.14E-5  | 2.26E-4  | 2.55E-3  | 7.13E-6  | 2.43E-4  | 4.36E-6  | -1.10E-3  | 1.71E-3  |

| Output flows and waste categories | Unit | A1      | A2      | A3      | A1-A3   | C2      | C3      | C4      | D        | Total   |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD                               | kg   | 1.84E-6 | 2.18E-7 | 2.92E-7 | 2.35E-6 | 1.61E-7 | 7.09E-7 | 4.32E-9 | -9.71E-7 | 2.26E-6 |
| NHWD                              | kg   | 1.69E-2 | 2.64E-3 | 5.42E-3 | 2.50E-2 | 3.91E-3 | 2.18E-2 | 1.56E-2 | -3.02E-3 | 6.32E-2 |
| RWD                               | kg   | 3.80E-6 | 1.17E-6 | 1.67E-7 | 5.14E-6 | 4.29E-7 | 1.65E-6 | 2.31E-8 | -1.80E-6 | 5.44E-6 |
| 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       | 1.98E-1 | 1.98E-1 | 0       | 0       | 0       | 0        | 1.98E-1 |
| 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