

# Environmental Profile

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

Ecochain v3.5.80



Product: 3079521 - EK PP-RCT SOCKET GY 90  
Unit: 1 piece  
Manufacturer: Wavin - CZ - Kostelec - Verified

Use the Ekoplastik System when you prefer an all plastic welded system or when you need pipes with larger diameters. The Ekoplastik system offers a maximum pipe diameter of 250 mm. Join pipes and fittings using a homogenous weld for secure and permanent connections.

LCA standard: NMD Bepalingsmethode 1.1 (2022)  
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off  
Externally verified: Yes  
Issue date: 27-01-2023  
End of validity: 27-01-2028  
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 - CZ - Kostelec - 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

**ECI** = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO2-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO2-eq]; **EP** = Eutrophication potential [kg PO4 3--eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **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 SBK set 1 | Unit         | A1       | A2       | A3       | A1-A3    | C2       | C3       | C4       | D         | Total    |
|--------------------------------|--------------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|
| ECI                            | euro         | 0.04     | 0        | 0.01     | 0.05     | 0        | 0.02     | 0        | -0.02     | 0.05     |
| ADPE                           | kg Sb-eq     | 7.67E-6  | 6.58E-7  | 3.63E-6  | 1.20E-5  | 1.38E-7  | 6.95E-7  | 1.53E-9  | -1.77E-6  | 1.10E-5  |
| ADPF                           | kg Sb-eq     | 7.56E-3  | 1.85E-4  | 2.58E-4  | 8.01E-3  | 3.89E-5  | 2.64E-4  | 2.13E-6  | -4.07E-3  | 4.25E-3  |
| GWP                            | kg CO2-eq    | 4.49E-1  | 2.52E-2  | 4.66E-2  | 5.21E-1  | 5.30E-3  | 1.93E-1  | 2.15E-3  | -2.71E-1  | 4.50E-1  |
| ODP                            | kg CFC-11-eq | 1.14E-8  | 4.68E-9  | 8.48E-8  | 1.01E-7  | 9.83E-10 | 3.58E-9  | 5.10E-11 | -1.20E-8  | 9.35E-8  |
| POCP                           | kg ethene-eq | 3.78E-4  | 1.51E-5  | 3.46E-5  | 4.27E-4  | 3.18E-6  | 2.70E-5  | 4.90E-7  | -1.71E-4  | 2.87E-4  |
| AP                             | kg SO2-eq    | 1.45E-3  | 1.09E-4  | 3.36E-4  | 1.90E-3  | 2.28E-5  | 1.38E-4  | 1.12E-6  | -6.59E-4  | 1.40E-3  |
| EP                             | kg PO4 3--eq | 1.47E-4  | 2.17E-5  | 4.27E-5  | 2.11E-4  | 4.56E-6  | 2.47E-5  | 4.89E-7  | -7.33E-5  | 1.68E-4  |
| HTP                            | kg 1,4-DB-eq | 7.75E-2  | 1.08E-2  | 5.73E-2  | 1.46E-1  | 2.27E-3  | 5.40E-2  | 1.68E-4  | -3.45E-2  | 1.68E-1  |
| FAETP                          | kg 1,4-DB-eq | 2.36E-3  | 3.16E-4  | 2.08E-3  | 4.76E-3  | 6.64E-5  | 1.35E-3  | 1.82E-4  | -1.07E-3  | 5.28E-3  |
| MAETP                          | kg 1,4-DB-eq | 5.31E+0  | 1.13E+0  | 5.93E+0  | 1.24E+1  | 2.37E-1  | 3.05E+0  | 1.81E-1  | -2.11E+0  | 1.37E+1  |
| TETP                           | kg 1,4-DB-eq | 3.71E-4  | 3.82E-5  | 3.14E-3  | 3.55E-3  | 8.03E-6  | 1.63E-4  | 2.75E-7  | -2.84E-4  | 3.44E-3  |
| Environmental impact           | Unit         | A1       | A2       | A3       | A1-A3    | C2       | C3       | C4       | D         | Total    |
| GWP-total                      | kg CO2 eq    | 4.69E-1  | 2.54E-2  | 5.54E-2  | 5.50E-1  | 5.35E-3  | 2.01E-1  | 2.52E-3  | -2.64E-1  | 4.95E-1  |
| GWP-f                          | kg CO2 eq    | 4.68E-1  | 2.54E-2  | 4.48E-2  | 5.38E-1  | 5.34E-3  | 1.94E-1  | 2.52E-3  | -2.80E-1  | 4.59E-1  |
| GWP-b                          | kg CO2 eq    | 1.01E-3  | 1.54E-5  | 9.86E-3  | 1.09E-2  | 3.24E-6  | 7.49E-3  | 2.19E-6  | 1.68E-2   | 3.51E-2  |
| GWP-luluc                      | kg CO2 eq    | 2.42E-4  | 9.00E-6  | 7.45E-4  | 9.96E-4  | 1.89E-6  | 3.07E-5  | 4.36E-8  | -1.72E-4  | 8.57E-4  |
| ODP                            | kg CFC11 eq  | 1.12E-8  | 5.86E-9  | 4.72E-8  | 6.42E-8  | 1.23E-9  | 4.24E-9  | 6.32E-11 | -1.28E-8  | 5.70E-8  |
| AP                             | mol H+ eq    | 1.76E-3  | 1.45E-4  | 4.25E-4  | 2.33E-3  | 3.04E-5  | 1.78E-4  | 1.51E-6  | -7.98E-4  | 1.74E-3  |
| EP-fw                          | kg P eq      | 8.57E-6  | 2.09E-7  | 1.52E-6  | 1.03E-5  | 4.40E-8  | 8.93E-7  | 1.99E-9  | -4.31E-6  | 6.93E-6  |
| EP-m                           | kg N eq      | 3.08E-4  | 5.18E-5  | 7.74E-5  | 4.37E-4  | 1.09E-5  | 5.33E-5  | 9.76E-7  | -1.48E-4  | 3.55E-4  |
| EP-T                           | mol N eq     | 3.45E-3  | 5.71E-4  | 9.72E-4  | 5.00E-3  | 1.20E-4  | 5.86E-4  | 6.13E-6  | -1.65E-3  | 4.06E-3  |
| POCP                           | kg NMVOC eq  | 1.49E-3  | 1.63E-4  | 2.23E-4  | 1.88E-3  | 3.43E-5  | 1.84E-4  | 2.30E-6  | -7.06E-4  | 1.39E-3  |
| ADP-mm                         | kg Sb eq     | 7.66E-6  | 6.58E-7  | 3.63E-6  | 1.20E-5  | 1.38E-7  | 6.95E-7  | 1.53E-9  | -1.77E-6  | 1.10E-5  |
| ADP-f                          | MJ           | 1.58E+1  | 3.90E-1  | 1.20E+1  | 2.82E+1  | 8.20E-2  | 5.44E-1  | 4.62E-3  | -8.38E+0  | 2.04E+1  |
| WDP                            | m3 depriv.   | 3.26E-1  | 1.20E-3  | 2.05E-1  | 5.32E-1  | 2.52E-4  | 1.05E-2  | 2.59E-5  | -1.63E-1  | 3.80E-1  |
| PM                             | disease inc. | 1.58E-8  | 2.29E-9  | 3.43E-9  | 2.16E-8  | 4.82E-10 | 2.89E-9  | 3.18E-11 | -7.56E-9  | 1.74E-8  |
| IR                             | kBq U-235 eq | 9.39E-3  | 1.71E-3  | 1.41E-1  | 1.52E-1  | 3.59E-4  | 1.66E-3  | 2.14E-5  | -4.85E-3  | 1.49E-1  |
| ETP-fw                         | CTUe         | 5.05E+0  | 3.17E-1  | 3.99E+0  | 9.36E+0  | 6.66E-2  | 6.33E-1  | 3.86E-3  | -2.33E+0  | 7.73E+0  |
| HTP-c                          | CTUh         | 1.22E-10 | 1.13E-11 | 8.44E-11 | 2.17E-10 | 2.37E-12 | 7.95E-11 | 1.15E-13 | -5.32E-11 | 2.46E-10 |
| HTP-nc                         | CTUh         | 3.33E-9  | 3.78E-10 | 2.71E-9  | 6.42E-9  | 7.94E-11 | 9.47E-10 | 2.50E-12 | -1.54E-9  | 5.90E-9  |
| SQP                            | Pt           | 1.45E+0  | 3.34E-1  | 3.28E+0  | 5.06E+0  | 7.02E-2  | 4.31E-1  | 1.18E-2  | -3.38E+0  | 2.19E+0  |

| Resource use                      | Unit | A1      | A2      | A3      | A1-A3   | C2      | C3      | C4      | D        | Total   |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| PERE                              | MJ   | 4.05E-1 | 5.60E-3 | 1.70E+0 | 2.11E+0 | 1.18E-3 | 2.64E-2 | 1.77E-4 | -6.72E-1 | 1.46E+0 |
| PERM                              | MJ   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0       |
| PERT                              | MJ   | 4.05E-1 | 5.60E-3 | 1.70E+0 | 2.11E+0 | 1.18E-3 | 2.64E-2 | 1.77E-4 | -6.72E-1 | 1.46E+0 |
| PENRE                             | MJ   | 1.70E+1 | 4.14E-1 | 1.20E+1 | 2.94E+1 | 8.71E-2 | 5.79E-1 | 4.90E-3 | -9.04E+0 | 2.10E+1 |
| PENRM                             | MJ   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0       |
| PENRT                             | MJ   | 1.70E+1 | 4.14E-1 | 1.20E+1 | 2.94E+1 | 8.71E-2 | 5.79E-1 | 4.90E-3 | -9.04E+0 | 2.10E+1 |
| PET                               | MJ   | 1.74E+1 | 4.20E-1 | 1.37E+1 | 3.15E+1 | 8.83E-2 | 6.06E-1 | 5.08E-3 | -9.71E+0 | 2.25E+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   | 5.33E-3 | 4.42E-5 | 6.62E-3 | 1.20E-2 | 9.28E-6 | 3.15E-4 | 5.68E-6 | -2.72E-3 | 9.60E-3 |
| Output flows and waste categories | Unit | A1      | A2      | A3      | A1-A3   | C2      | C3      | C4      | D        | Total   |
| HWD                               | kg   | 2.50E-6 | 9.98E-7 | 1.84E-7 | 3.68E-6 | 2.10E-7 | 9.12E-7 | 5.59E-9 | -2.47E-6 | 2.34E-6 |
| NHWD                              | kg   | 2.39E-2 | 2.42E-2 | 5.28E-3 | 5.34E-2 | 5.08E-3 | 2.81E-2 | 2.03E-2 | -7.58E-3 | 9.93E-2 |
| RWD                               | kg   | 8.23E-6 | 2.65E-6 | 2.75E-7 | 1.12E-5 | 5.58E-7 | 2.13E-6 | 3.01E-8 | -4.47E-6 | 9.40E-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       | 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       |