

Environmental Profile

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

Ecochain v3.5.64



Product: 3064078 - PE Collector Pipe BR 40 L=300 STR
 Unit: 1 piece
 Manufacturer: Wavin - SE - Eskilstuna

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 20-06-2022
 End of validity: 20-06-2027
 Verifier: Harry van Ewijk - 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 (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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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]

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Results

| Environmental impact | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|----------------------|--------------|----------|----------|---------|----------|---------|---------|----------|----------|---------|
| GWP-total | kg CO2 eq | 1.36E+2 | 1.51E+1 | 6.20E+0 | 1.58E+2 | 2.32E+0 | 1.27E+2 | 1.28E+0 | -1.17E+2 | 1.71E+2 |
| GWP-f | kg CO2 eq | 1.86E+2 | 1.51E+1 | 4.50E+0 | 2.06E+2 | 2.31E+0 | 7.62E+1 | 1.28E+0 | -1.17E+2 | 1.69E+2 |
| GWP-b | kg CO2 eq | -5.02E+1 | -9.15E-4 | 1.18E+0 | -4.90E+1 | 1.40E-3 | 5.09E+1 | 9.61E-4 | -4.38E-1 | 1.52E+0 |
| GWP-luluc | kg CO2 eq | 8.72E-2 | 8.87E-3 | 5.23E-1 | 6.19E-1 | 8.19E-4 | 1.31E-2 | 1.86E-5 | -3.36E-2 | 5.99E-1 |
| ODP | kg CFC11 eq | 5.86E-6 | 3.12E-6 | 5.09E-7 | 9.49E-6 | 5.33E-7 | 1.76E-6 | 2.74E-8 | -5.76E-6 | 6.05E-6 |
| AP | mol H+ eq | 7.16E-1 | 3.63E-1 | 3.81E-2 | 1.12E+0 | 1.32E-2 | 7.61E-2 | 6.54E-4 | -3.44E-1 | 8.64E-1 |
| EP-fw | kg P eq | 3.51E-3 | 9.04E-5 | 8.30E-5 | 3.69E-3 | 1.90E-5 | 3.80E-4 | 8.55E-7 | -1.52E-3 | 2.57E-3 |
| EP-m | kg N eq | 1.28E-1 | 9.21E-2 | 1.13E-2 | 2.32E-1 | 4.72E-3 | 2.29E-2 | 4.60E-4 | -6.53E-2 | 1.94E-1 |
| EP-T | mol N eq | 1.47E+0 | 1.02E+0 | 1.24E-1 | 2.62E+0 | 5.20E-2 | 2.52E-1 | 2.65E-3 | -7.60E-1 | 2.17E+0 |
| POCP | kg NMVOC eq | 6.52E-1 | 2.68E-1 | 3.44E-2 | 9.54E-1 | 1.49E-2 | 7.86E-2 | 1.04E-3 | -3.23E-1 | 7.26E-1 |
| ADP-mm | kg Sb eq | 2.59E-3 | 1.98E-4 | 1.35E-4 | 2.92E-3 | 5.99E-5 | 2.88E-4 | 6.58E-7 | -7.62E-4 | 2.51E-3 |
| ADP-f | MJ | 6.33E+3 | 2.04E+2 | 4.47E+1 | 6.58E+3 | 3.55E+1 | 2.30E+2 | 2.00E+0 | -3.48E+3 | 3.37E+3 |
| WDP | m3 depriv. | 1.46E+2 | 4.50E-1 | 2.88E+1 | 1.75E+2 | 1.09E-1 | 4.48E+0 | 1.00E-2 | -6.76E+1 | 1.12E+2 |
| PM | disease inc. | 8.10E-6 | 7.45E-7 | 6.42E-7 | 9.49E-6 | 2.09E-7 | 1.22E-6 | 1.37E-8 | -2.94E-6 | 8.00E-6 |
| IR | kBq U-235 eq | 4.77E+0 | 8.67E-1 | 1.33E-1 | 5.77E+0 | 1.55E-1 | 6.99E-1 | 9.30E-3 | -2.15E+0 | 4.49E+0 |
| ETP-fw | CTUe | 1.33E+3 | 1.49E+2 | 1.25E+2 | 1.60E+3 | 2.88E+1 | 2.62E+2 | 1.76E+0 | -7.13E+2 | 1.18E+3 |
| HTP-c | CTUh | 7.14E-8 | 7.92E-9 | 4.92E-9 | 8.42E-8 | 1.03E-9 | 3.44E-8 | 4.92E-11 | -2.71E-8 | 9.26E-8 |
| HTP-nc | CTUh | 1.37E-6 | 1.38E-7 | 1.34E-7 | 1.65E-6 | 3.44E-8 | 4.00E-7 | 1.12E-9 | -6.27E-7 | 1.46E-6 |
| SQP | Pt | 4.89E+3 | 8.03E+1 | 5.87E+0 | 4.98E+3 | 3.04E+1 | 1.84E+2 | 5.13E+0 | -1.10E+3 | 4.10E+3 |
| Resource use | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
| PERE | MJ | 8.03E+2 | 1.79E+0 | 2.82E+2 | 1.09E+3 | 5.10E-1 | 1.13E+1 | 7.86E-2 | -2.49E+2 | 8.49E+2 |
| PERM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PERT | MJ | 8.03E+2 | 1.79E+0 | 2.82E+2 | 1.09E+3 | 5.10E-1 | 1.13E+1 | 7.86E-2 | -2.49E+2 | 8.49E+2 |
| PENRE | MJ | 6.80E+3 | 2.16E+2 | 4.74E+1 | 7.06E+3 | 3.77E+1 | 2.45E+2 | 2.12E+0 | -3.76E+3 | 3.59E+3 |
| PENRM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PENRT | MJ | 6.80E+3 | 2.16E+2 | 4.74E+1 | 7.06E+3 | 3.77E+1 | 2.45E+2 | 2.12E+0 | -3.76E+3 | 3.59E+3 |
| PET | MJ | 7.60E+3 | 2.18E+2 | 3.29E+2 | 8.15E+3 | 3.82E+1 | 2.57E+2 | 2.20E+0 | -4.01E+3 | 4.44E+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 | 2.29E+0 | 1.56E-2 | 6.84E-1 | 2.99E+0 | 4.02E-3 | 1.37E-1 | 2.47E-3 | -1.04E+0 | 2.09E+0 |

| Output flows and waste categories | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD | kg | 1.28E-3 | 3.03E-4 | 6.80E-5 | 1.65E-3 | 9.08E-5 | 3.79E-4 | 2.41E-6 | -1.06E-3 | 1.06E-3 |
| NHWD | kg | 9.36E+0 | 4.87E+0 | 2.08E-1 | 1.44E+1 | 2.20E+0 | 1.21E+1 | 8.80E+0 | -3.25E+0 | 3.43E+1 |
| RWD | kg | 4.39E-3 | 1.39E-3 | 1.89E-4 | 5.96E-3 | 2.42E-4 | 8.89E-4 | 1.31E-5 | -2.01E-3 | 5.10E-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 |



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