

Environmental Profile

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

Ecochain v3.5.80



Product: 3043904 - Wafix PP Reducer WT 50x40
 Unit: 1 piece
 Manufacturer: Wavin - PL -Buk - Extra products

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



Wafix PP is a versatile, uncomplicated solution for your indoor drainage. You can easily install the impact-resistant pipes even in frost. Their excellent chemical resistance makes them ideal for cast-in applications.

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

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 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 | 5.95E-2 | 5.55E-4 | 1.45E-4 | 6.02E-2 | 8.75E-4 | 8.90E-2 | 4.12E-4 | -5.12E-2 | 9.93E-2 |
| GWP-f | kg CO2 eq | 1.09E-1 | 5.55E-4 | 1.46E-4 | 1.09E-1 | 8.74E-4 | 3.59E-2 | 4.12E-4 | -5.81E-2 | 8.85E-2 |
| GWP-b | kg CO2 eq | -4.93E-2 | 3.37E-7 | -1.54E-6 | -4.93E-2 | 5.31E-7 | 5.31E-2 | 3.57E-7 | 7.00E-3 | 1.08E-2 |
| GWP-luluc | kg CO2 eq | 1.26E-4 | 1.96E-7 | 1.49E-7 | 1.26E-4 | 3.09E-7 | 5.38E-6 | 7.18E-9 | -8.67E-5 | 4.53E-5 |
| ODP | kg CFC11 eq | 6.16E-9 | 1.28E-10 | 8.26E-12 | 6.29E-9 | 2.01E-10 | 8.51E-10 | 1.03E-11 | -4.02E-9 | 3.34E-9 |
| AP | mol H+ eq | 4.84E-4 | 3.16E-6 | 1.47E-6 | 4.88E-4 | 4.98E-6 | 3.52E-5 | 2.47E-7 | -2.05E-4 | 3.24E-4 |
| EP-fw | kg P eq | 2.98E-6 | 4.57E-9 | 8.24E-9 | 2.99E-6 | 7.19E-9 | 1.60E-7 | 3.27E-10 | -1.52E-6 | 1.63E-6 |
| EP-m | kg N eq | 9.16E-5 | 1.13E-6 | 1.55E-7 | 9.29E-5 | 1.78E-6 | 1.10E-5 | 1.59E-7 | -4.31E-5 | 6.26E-5 |
| EP-T | mol N eq | 1.01E-3 | 1.25E-5 | 1.85E-6 | 1.03E-3 | 1.96E-5 | 1.21E-4 | 1.00E-6 | -4.91E-4 | 6.78E-4 |
| POCP | kg NMVOC eq | 3.97E-4 | 3.56E-6 | 6.28E-7 | 4.01E-4 | 5.61E-6 | 3.72E-5 | 3.76E-7 | -1.89E-4 | 2.55E-4 |
| ADP-mm | kg Sb eq | 4.43E-6 | 1.44E-8 | 1.97E-8 | 4.46E-6 | 2.26E-8 | 1.35E-7 | 2.51E-10 | -4.54E-7 | 4.17E-6 |
| ADP-f | MJ | 3.12E+0 | 8.52E-3 | 1.36E-3 | 3.13E+0 | 1.34E-2 | 1.00E-1 | 7.56E-4 | -1.56E+0 | 1.68E+0 |
| WDP | m3 depriv. | 6.69E-2 | 2.61E-5 | 5.22E-5 | 6.70E-2 | 4.12E-5 | 1.79E-3 | 4.42E-6 | -3.70E-2 | 3.18E-2 |
| PM | disease inc. | 5.20E-9 | 5.01E-11 | 9.08E-12 | 5.26E-9 | 7.89E-11 | 5.56E-10 | 5.20E-12 | -2.67E-9 | 3.24E-9 |
| IR | kBq U-235 eq | 3.09E-3 | 3.72E-5 | 1.02E-6 | 3.13E-3 | 5.86E-5 | 3.22E-4 | 3.49E-6 | -1.46E-3 | 2.06E-3 |
| ETP-fw | CTUe | 2.32E+0 | 6.92E-3 | 1.21E-2 | 2.34E+0 | 1.09E-2 | 1.21E-1 | 6.32E-4 | -1.01E+0 | 1.46E+0 |
| HTP-c | CTUh | 8.39E-11 | 2.46E-13 | 6.17E-13 | 8.47E-11 | 3.88E-13 | 1.52E-11 | 1.89E-14 | -3.00E-11 | 7.04E-11 |
| HTP-nc | CTUh | 1.54E-9 | 8.25E-12 | 1.57E-11 | 1.57E-9 | 1.30E-11 | 1.77E-10 | 4.10E-13 | -3.23E-10 | 1.44E-9 |
| SQP | Pt | 4.70E+0 | 7.29E-3 | 2.24E-3 | 4.71E+0 | 1.15E-2 | 7.85E-2 | 1.94E-3 | -4.92E+0 | -1.19E-1 |
| Resource use | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
| PERE | MJ | 1.27E+0 | 1.22E-4 | 2.40E-2 | 1.30E+0 | 1.92E-4 | 4.71E-3 | 2.89E-5 | -7.93E-1 | 5.07E-1 |
| PERM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PERT | MJ | 1.27E+0 | 1.22E-4 | 2.40E-2 | 1.30E+0 | 1.92E-4 | 4.71E-3 | 2.89E-5 | -7.93E-1 | 5.07E-1 |
| PENRE | MJ | 3.35E+0 | 9.04E-3 | 1.44E-3 | 3.36E+0 | 1.42E-2 | 1.07E-1 | 8.02E-4 | -1.68E+0 | 1.79E+0 |
| PENRM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PENRT | MJ | 3.35E+0 | 9.04E-3 | 1.44E-3 | 3.36E+0 | 1.42E-2 | 1.07E-1 | 8.02E-4 | -1.68E+0 | 1.79E+0 |
| PET | MJ | 4.62E+0 | 9.17E-3 | 2.55E-2 | 4.65E+0 | 1.44E-2 | 1.11E-1 | 8.31E-4 | -2.48E+0 | 2.30E+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 | 1.28E-3 | 9.64E-7 | 1.46E-6 | 1.29E-3 | 1.52E-6 | 5.65E-5 | 9.29E-7 | -7.05E-4 | 6.41E-4 |

| Output flows and waste categories | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|-----------------------------------|------|---------|---------|----------|---------|---------|---------|----------|----------|---------|
| HWD | kg | 1.21E-6 | 2.18E-8 | 2.73E-13 | 1.23E-6 | 3.43E-8 | 1.78E-7 | 9.16E-10 | -9.15E-7 | 5.25E-7 |
| NHWD | kg | 9.72E-3 | 5.28E-4 | 1.05E-6 | 1.02E-2 | 8.31E-4 | 5.30E-3 | 3.32E-3 | -3.79E-3 | 1.59E-2 |
| RWD | kg | 3.17E-6 | 5.79E-8 | 1.10E-13 | 3.23E-6 | 9.12E-8 | 4.18E-7 | 4.92E-9 | -1.45E-6 | 2.30E-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 |



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