

Environmental Profile

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

Ecochain v4.0.3



Product: 3041547 - Tegra NG2 1000 PP Bend 150° 250 SW
 Unit: 1 piece
 Manufacturer: Wavin

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 26-07-2023
 End of validity: 26-07-2028
 Verifier: Martijn van Hövell - SGS Search



Wavin's Tegra drains that Wavin offers are also part of a sustainable total solution for your sewer system. Your system becomes accessible for inspection and maintenance-friendly thanks to our flow profiles. Tegra wells are resistant to acids, bases and solvents.

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 (2021). (☑ = 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]

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Results

| Environmental impact | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|----------------------|--------------|----------|---------|----------|----------|----------|---------|----------|----------|----------|
| GWP-total | kg CO2 eq | 1.19E+2 | 4.72E+0 | 1.76E+0 | 1.25E+2 | 1.67E+0 | 6.24E+1 | 7.86E-1 | -7.80E+1 | 1.12E+2 |
| GWP-f | kg CO2 eq | 1.35E+2 | 4.71E+0 | 1.78E+0 | 1.42E+2 | 1.67E+0 | 4.85E+1 | 7.86E-1 | -7.77E+1 | 1.15E+2 |
| GWP-b | kg CO2 eq | -1.64E+1 | 2.18E-3 | -2.09E-2 | -1.64E+1 | 1.01E-3 | 1.39E+1 | 6.85E-4 | -2.65E-1 | -2.76E+0 |
| GWP-luluc | kg CO2 eq | 4.75E-2 | 1.73E-3 | 1.94E-3 | 5.11E-2 | 5.90E-4 | 9.40E-3 | 1.34E-5 | -2.13E-2 | 3.98E-2 |
| ODP | kg CFC11 eq | 4.21E-6 | 1.04E-6 | 1.01E-7 | 5.35E-6 | 3.84E-7 | 1.23E-6 | 1.97E-8 | -3.05E-6 | 3.94E-6 |
| AP | mol H+ eq | 5.05E-1 | 2.73E-2 | 1.95E-2 | 5.51E-1 | 9.50E-3 | 5.17E-2 | 4.70E-4 | -2.25E-1 | 3.88E-1 |
| EP-fw | kg P eq | 2.15E-3 | 4.76E-5 | 1.10E-4 | 2.30E-3 | 1.37E-5 | 2.71E-4 | 6.13E-7 | -9.21E-4 | 1.67E-3 |
| EP-m | kg N eq | 8.63E-2 | 9.63E-3 | 2.00E-3 | 9.79E-2 | 3.40E-3 | 1.51E-2 | 3.06E-4 | -4.10E-2 | 7.57E-2 |
| EP-T | mol N eq | 9.91E-1 | 1.06E-1 | 2.39E-2 | 1.12E+0 | 3.75E-2 | 1.66E-1 | 1.91E-3 | -4.56E-1 | 8.71E-1 |
| POCP | kg NMVOC eq | 4.38E-1 | 3.03E-2 | 8.01E-3 | 4.76E-1 | 1.07E-2 | 5.24E-2 | 7.17E-4 | -2.07E-1 | 3.33E-1 |
| ADP-mm | kg Sb eq | 3.41E-3 | 1.19E-4 | 2.49E-4 | 3.78E-3 | 4.31E-5 | 2.04E-4 | 4.74E-7 | -5.33E-4 | 3.49E-3 |
| ADP-f | MJ | 4.70E+3 | 7.11E+1 | 1.70E+1 | 4.79E+3 | 2.56E+1 | 1.64E+2 | 1.44E+0 | -2.42E+3 | 2.55E+3 |
| WDP | m3 depriv. | 9.09E+1 | 2.54E-1 | 6.91E-1 | 9.18E+1 | 7.86E-2 | 3.19E+0 | 7.24E-3 | -4.19E+1 | 5.32E+1 |
| PM | disease inc. | 4.87E-6 | 4.23E-7 | 1.17E-7 | 5.41E-6 | 1.51E-7 | 8.50E-7 | 9.90E-9 | -2.03E-6 | 4.39E-6 |
| IR | kBq U-235 eq | 2.91E+0 | 2.98E-1 | 1.26E-2 | 3.22E+0 | 1.12E-1 | 4.94E-1 | 6.68E-3 | -1.20E+0 | 2.63E+0 |
| ETP-fw | CTUe | 9.42E+2 | 6.34E+1 | 1.61E+2 | 1.17E+3 | 2.08E+1 | 1.84E+2 | 1.20E+0 | -3.49E+2 | 1.02E+3 |
| HTP-c | CTUh | 4.59E-8 | 2.06E-9 | 8.27E-9 | 5.62E-8 | 7.40E-10 | 2.23E-8 | 3.52E-11 | -1.76E-8 | 6.16E-8 |
| HTP-nc | CTUh | 1.03E-6 | 6.93E-8 | 2.08E-7 | 1.31E-6 | 2.48E-8 | 2.74E-7 | 7.75E-10 | -4.00E-7 | 1.21E-6 |
| SQP | Pt | 1.68E+3 | 6.17E+1 | 2.91E+1 | 1.77E+3 | 2.19E+1 | 1.31E+2 | 3.69E+0 | -1.04E+3 | 8.83E+2 |
| Resource use | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
| PERE | MJ | 3.91E+2 | 8.90E-1 | 3.15E+2 | 7.06E+2 | 3.67E-1 | 8.05E+0 | 5.57E-2 | -1.76E+2 | 5.38E+2 |
| PERM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PERT | MJ | 3.91E+2 | 8.90E-1 | 3.15E+2 | 7.06E+2 | 3.67E-1 | 8.05E+0 | 5.57E-2 | -1.76E+2 | 5.38E+2 |
| PENRE | MJ | 5.04E+3 | 7.55E+1 | 1.81E+1 | 5.14E+3 | 2.72E+1 | 1.74E+2 | 1.53E+0 | -2.61E+3 | 2.73E+3 |
| PENRM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PENRT | MJ | 5.04E+3 | 7.55E+1 | 1.81E+1 | 5.14E+3 | 2.72E+1 | 1.74E+2 | 1.53E+0 | -2.61E+3 | 2.73E+3 |
| PET | MJ | 5.43E+3 | 7.64E+1 | 3.33E+2 | 5.84E+3 | 2.75E+1 | 1.82E+2 | 1.58E+0 | -2.79E+3 | 3.26E+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 | 1.40E+0 | 8.66E-3 | 1.91E-2 | 1.42E+0 | 2.90E-3 | 9.42E-2 | 1.77E-3 | -6.35E-1 | 8.87E-1 |

| Output flows and waste categories | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD | kg | 8.97E-4 | 1.80E-4 | 3.60E-9 | 1.08E-3 | 6.55E-5 | 2.66E-4 | 1.73E-6 | -6.31E-4 | 7.80E-4 |
| NHWD | kg | 8.33E+0 | 4.51E+0 | 1.42E-2 | 1.29E+1 | 1.59E+0 | 8.03E+0 | 6.34E+0 | -2.38E+0 | 2.64E+1 |
| RWD | kg | 2.86E-3 | 4.67E-4 | 1.34E-9 | 3.33E-3 | 1.74E-4 | 6.27E-4 | 9.40E-6 | -1.10E-3 | 3.04E-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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