

Environmental Profile

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

Ecochain v3.5.80



Product: 3025934 - PVC Reducer GY 63x40 BC
 Unit: 1 Piece
 Manufacturer: Wavin - FR - Varennes

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 24-11-2022
 End of validity: 24-11-2027
 Verifier: Martijn van Hövell - SGS Search



The Wavin range of PVC pipes and fittings to be glued covers all the usual diameters and allows you to create networks that are 100% compatible, homogeneous and meet the requirements of the French market.

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 - FR - Varennes (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 | ☑ | ☑ | ☑ | ☑ |

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 | 9.10E-2 | 3.06E-3 | 7.20E-3 | 1.01E-1 | 1.21E-3 | 7.03E-2 | 3.72E-4 | -5.12E-2 | 1.22E-1 |
| GWP-f | kg CO2 eq | 1.13E-1 | 3.05E-3 | 5.10E-3 | 1.21E-1 | 1.21E-3 | 4.15E-2 | 3.72E-4 | -6.42E-2 | 1.00E-1 |
| GWP-b | kg CO2 eq | -2.21E-2 | 1.85E-6 | 2.08E-3 | -2.00E-2 | 7.35E-7 | 2.87E-2 | 4.66E-7 | 1.31E-2 | 2.18E-2 |
| GWP-luluc | kg CO2 eq | 1.73E-4 | 1.08E-6 | 1.17E-5 | 1.85E-4 | 4.29E-7 | 1.51E-5 | 1.01E-8 | -1.37E-4 | 6.41E-5 |
| ODP | kg CFC11 eq | 5.16E-8 | 7.04E-10 | 7.28E-10 | 5.31E-8 | 2.79E-10 | 4.19E-9 | 1.41E-11 | -2.67E-8 | 3.08E-8 |
| AP | mol H+ eq | 5.53E-4 | 1.74E-5 | 5.68E-5 | 6.27E-4 | 6.90E-6 | 7.60E-5 | 3.44E-7 | -2.74E-4 | 4.36E-4 |
| EP-fw | kg P eq | 5.42E-6 | 2.51E-8 | 1.33E-7 | 5.58E-6 | 9.96E-9 | 5.05E-7 | 4.52E-10 | -3.14E-6 | 2.95E-6 |
| EP-m | kg N eq | 1.08E-4 | 6.22E-6 | 1.47E-5 | 1.29E-4 | 2.47E-6 | 1.96E-5 | 2.08E-7 | -5.36E-5 | 9.77E-5 |
| EP-T | mol N eq | 1.16E-3 | 6.86E-5 | 2.11E-4 | 1.44E-3 | 2.72E-5 | 2.16E-4 | 1.37E-6 | -5.91E-4 | 1.09E-3 |
| POCP | kg NMVOC eq | 3.68E-4 | 1.96E-5 | 4.35E-5 | 4.31E-4 | 7.77E-6 | 6.45E-5 | 4.70E-7 | -1.89E-4 | 3.15E-4 |
| ADP-mm | kg Sb eq | 9.89E-5 | 7.90E-8 | 2.62E-7 | 9.92E-5 | 3.13E-8 | 2.99E-7 | 3.46E-10 | -1.16E-6 | 9.84E-5 |
| ADP-f | MJ | 2.74E+0 | 4.69E-2 | 6.65E-2 | 2.86E+0 | 1.86E-2 | 2.01E-1 | 1.03E-3 | -1.45E+0 | 1.62E+0 |
| WDP | m3 depriv. | 1.59E-1 | 1.44E-4 | 8.68E-2 | 2.46E-1 | 5.70E-5 | 7.44E-3 | 7.55E-6 | -9.19E-2 | 1.61E-1 |
| PM | disease inc. | 4.71E-9 | 2.76E-10 | 7.39E-10 | 5.73E-9 | 1.09E-10 | 9.62E-10 | 7.09E-12 | -2.88E-9 | 3.93E-9 |
| IR | kBq U-235 eq | 6.28E-3 | 2.05E-4 | 1.42E-4 | 6.63E-3 | 8.12E-5 | 7.17E-4 | 4.72E-6 | -3.31E-3 | 4.13E-3 |
| ETP-fw | CTUe | 4.21E+0 | 3.81E-2 | 1.38E-1 | 4.38E+0 | 1.51E-2 | 1.44E+0 | 1.57E-2 | -1.80E+0 | 4.06E+0 |
| HTP-c | CTUh | 9.47E-11 | 1.35E-12 | 7.39E-12 | 1.03E-10 | 5.37E-13 | 2.42E-11 | 2.87E-14 | -4.25E-11 | 8.57E-11 |
| HTP-nc | CTUh | 2.81E-9 | 4.54E-11 | 2.39E-10 | 3.10E-9 | 1.80E-11 | 5.28E-10 | 3.02E-12 | -1.25E-9 | 2.40E-9 |
| SQP | Pt | 2.80E+0 | 4.01E-2 | 1.25E+0 | 4.09E+0 | 1.59E-2 | 1.24E-1 | 2.63E-3 | -4.14E+0 | 9.34E-2 |
| Resource use | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
| PERE | MJ | 5.11E-1 | 6.72E-4 | 3.17E-1 | 8.29E-1 | 2.67E-4 | 1.39E-2 | 3.74E-5 | -7.29E-1 | 1.14E-1 |
| PERM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PERT | MJ | 5.11E-1 | 6.72E-4 | 3.17E-1 | 8.29E-1 | 2.67E-4 | 1.39E-2 | 3.74E-5 | -7.29E-1 | 1.14E-1 |
| PENRE | MJ | 2.94E+0 | 4.98E-2 | 7.15E-2 | 3.06E+0 | 1.97E-2 | 2.14E-1 | 1.09E-3 | -1.57E+0 | 1.73E+0 |
| PENRM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PENRT | MJ | 2.94E+0 | 4.98E-2 | 7.15E-2 | 3.06E+0 | 1.97E-2 | 2.14E-1 | 1.09E-3 | -1.57E+0 | 1.73E+0 |
| PET | MJ | 3.45E+0 | 5.04E-2 | 3.89E-1 | 3.89E+0 | 2.00E-2 | 2.27E-1 | 1.13E-3 | -2.30E+0 | 1.84E+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 | 1.97E-3 | 5.30E-6 | 2.05E-3 | 4.02E-3 | 2.10E-6 | 2.07E-4 | 1.26E-6 | -1.28E-3 | 2.95E-3 |

| Output flows and waste categories | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD | kg | 1.44E-5 | 1.20E-7 | 6.26E-8 | 1.46E-5 | 4.75E-8 | 3.41E-7 | 1.26E-9 | -1.38E-6 | 1.36E-5 |
| NHWD | kg | 1.31E-2 | 2.91E-3 | 4.67E-4 | 1.64E-2 | 1.15E-3 | 7.78E-3 | 4.60E-3 | -5.78E-3 | 2.42E-2 |
| RWD | kg | 5.82E-6 | 3.19E-7 | 1.27E-7 | 6.26E-6 | 1.26E-7 | 7.91E-7 | 6.71E-9 | -3.03E-6 | 4.16E-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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