

Environmental Profile

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

Ecochain v3.5.64



Product: 3067800 - SiTech+ Coupler STMM 75 S/S
 Unit: 1 piece
 Manufacturer: Wavin - IT - SM Maddalena

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



Wavin SiTech+ is a waste water system made of mineral- reinforced polypropylene (PP), which offers increased durability, but more importantly is quiet and easy to install.

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 - IT - SM Maddalena (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]

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 | 2.99E-1 | 4.62E-3 | 1.92E-2 | 3.23E-1 | 3.67E-3 | 2.09E-1 | 1.83E-3 | -1.75E-1 | 3.63E-1 |
| GWP-f | kg CO2 eq | 3.43E-1 | 4.62E-3 | 1.64E-2 | 3.64E-1 | 3.67E-3 | 1.55E-1 | 1.83E-3 | -1.98E-1 | 3.26E-1 |
| GWP-b | kg CO2 eq | -4.36E-2 | 2.81E-6 | 1.39E-3 | -4.22E-2 | 2.23E-6 | 5.45E-2 | 1.63E-6 | 2.35E-2 | 3.58E-2 |
| GWP-luluc | kg CO2 eq | 2.66E-4 | 1.64E-6 | 1.39E-3 | 1.66E-3 | 1.30E-6 | 2.03E-5 | 3.13E-8 | -2.21E-4 | 1.46E-3 |
| ODP | kg CFC11 eq | 2.12E-8 | 1.06E-9 | 1.65E-9 | 2.39E-8 | 8.45E-10 | 3.00E-9 | 4.64E-11 | -1.08E-8 | 1.70E-8 |
| AP | mol H+ eq | 1.39E-3 | 2.63E-5 | 6.63E-5 | 1.48E-3 | 2.09E-5 | 1.26E-4 | 1.11E-6 | -6.18E-4 | 1.01E-3 |
| EP-fw | kg P eq | 7.38E-6 | 3.80E-8 | 2.55E-7 | 7.67E-6 | 3.02E-8 | 5.96E-7 | 1.44E-9 | -4.18E-6 | 4.12E-6 |
| EP-m | kg N eq | 2.53E-4 | 9.42E-6 | 1.12E-5 | 2.74E-4 | 7.47E-6 | 3.85E-5 | 9.19E-7 | -1.21E-4 | 2.00E-4 |
| EP-T | mol N eq | 2.79E-3 | 1.04E-4 | 1.26E-4 | 3.02E-3 | 8.23E-5 | 4.24E-4 | 4.50E-6 | -1.36E-3 | 2.17E-3 |
| POCP | kg NMVOC eq | 1.19E-3 | 2.97E-5 | 3.91E-5 | 1.25E-3 | 2.35E-5 | 1.31E-4 | 1.68E-6 | -5.43E-4 | 8.67E-4 |
| ADP-mm | kg Sb eq | 2.51E-5 | 1.20E-7 | 4.00E-7 | 2.56E-5 | 9.48E-8 | 4.80E-7 | 1.11E-9 | -2.01E-6 | 2.41E-5 |
| ADP-f | MJ | 1.13E+1 | 7.09E-2 | 2.16E-1 | 1.16E+1 | 5.63E-2 | 3.67E-1 | 3.39E-3 | -5.68E+0 | 6.33E+0 |
| WDP | m3 depriv. | 2.26E-1 | 2.18E-4 | 7.65E-2 | 3.03E-1 | 1.73E-4 | 7.39E-3 | 1.55E-5 | -1.24E-1 | 1.87E-1 |
| PM | disease inc. | 1.45E-8 | 4.17E-10 | 6.64E-10 | 1.56E-8 | 3.31E-10 | 1.97E-9 | 2.33E-11 | -6.91E-9 | 1.10E-8 |
| IR | kBq U-235 eq | 1.08E-2 | 3.10E-4 | 2.02E-4 | 1.14E-2 | 2.46E-4 | 1.14E-3 | 1.58E-5 | -4.34E-3 | 8.42E-3 |
| ETP-fw | CTUe | 5.63E+0 | 5.76E-2 | 3.41E-1 | 6.03E+0 | 4.57E-2 | 5.11E-1 | 3.42E-3 | -2.66E+0 | 3.93E+0 |
| HTP-c | CTUh | 1.17E-10 | 2.05E-12 | 1.82E-11 | 1.38E-10 | 1.63E-12 | 4.92E-11 | 8.27E-14 | -5.83E-11 | 1.30E-10 |
| HTP-nc | CTUh | 2.79E-9 | 6.86E-11 | 3.77E-10 | 3.24E-9 | 5.45E-11 | 6.38E-10 | 1.96E-12 | -1.39E-9 | 2.54E-9 |
| SQP | Pt | 5.29E+0 | 6.07E-2 | 3.94E-2 | 5.39E+0 | 4.81E-2 | 2.85E-1 | 8.69E-3 | -7.56E+0 | -1.83E+0 |
| Resource use | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
| PERE | MJ | 9.27E-1 | 1.02E-3 | 7.48E-1 | 1.68E+0 | 8.07E-4 | 1.76E-2 | 1.35E-4 | -1.31E+0 | 3.85E-1 |
| PERM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PERT | MJ | 9.27E-1 | 1.02E-3 | 7.48E-1 | 1.68E+0 | 8.07E-4 | 1.76E-2 | 1.35E-4 | -1.31E+0 | 3.85E-1 |
| PENRE | MJ | 1.21E+1 | 7.53E-2 | 2.36E-1 | 1.24E+1 | 5.97E-2 | 3.91E-1 | 3.59E-3 | -6.13E+0 | 6.76E+0 |
| PENRM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PENRT | MJ | 1.21E+1 | 7.53E-2 | 2.36E-1 | 1.24E+1 | 5.97E-2 | 3.91E-1 | 3.59E-3 | -6.13E+0 | 6.76E+0 |
| PET | MJ | 1.30E+1 | 7.63E-2 | 9.84E-1 | 1.41E+1 | 6.05E-2 | 4.09E-1 | 3.73E-3 | -7.44E+0 | 7.14E+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 | 3.95E-3 | 8.02E-6 | 1.82E-3 | 5.78E-3 | 6.37E-6 | 2.72E-4 | 4.19E-6 | -2.29E-3 | 3.78E-3 |

| Output flows and waste categories | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD | kg | 2.72E-6 | 1.81E-7 | 2.10E-7 | 3.11E-6 | 1.44E-7 | 6.54E-7 | 4.06E-9 | -2.12E-6 | 1.79E-6 |
| NHWD | kg | 2.12E-2 | 4.40E-3 | 2.05E-3 | 2.76E-2 | 3.49E-3 | 1.88E-2 | 1.49E-2 | -7.69E-3 | 5.71E-2 |
| RWD | kg | 1.20E-5 | 4.82E-7 | 2.24E-7 | 1.27E-5 | 3.83E-7 | 1.46E-6 | 2.22E-8 | -4.18E-6 | 1.04E-5 |
| 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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