

Environmental Profile

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

Ecochain v3.5.80



Product: 3001303 - Wafix PVC Bend 88° GY 125 SN4 S/S
Unit: 1 piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
7772 SG Hardenberg
Netherlands

Wavin carries a complete PVC range of outdoor sewers. With PVC as a material, a smooth-walled, flexible and completely watertight piping system is obtained. Moreover, PVC is absolutely resistant to all substances that occur in domestic waste water. By working with a light material, large pipe lengths and plug connections, a very fast installation is guaranteed.

LCA standard: NMD Bepalingsmethode 1.1 (2022)
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



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 - NL - Hardenberg - Verified (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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					D Reuse- Recovery- Recycling- potential											

Environmental impacts and parameters

ECI = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO2-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO2-eq]; **EP** = Eutrophication potential [kg PO4 3--eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **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 SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.14	0	0.01	0.15	0	0.05	0	-0.07	0.13
ADPE	kg Sb-eq	1.14E-3	4.70E-7	1.99E-6	1.15E-3	4.22E-7	3.61E-6	4.71E-9	-1.39E-5	1.14E-3
ADPF	kg Sb-eq	1.60E-2	1.35E-4	3.42E-4	1.65E-2	1.19E-4	1.25E-3	6.53E-6	-8.59E-3	9.27E-3
GWP	kg CO2-eq	1.28E+0	1.84E-2	6.50E-2	1.36E+0	1.62E-2	4.59E-1	4.71E-3	-7.17E-1	1.12E+0
ODP	kg CFC-11-eq	6.35E-7	3.27E-9	5.14E-9	6.44E-7	3.00E-9	4.96E-8	1.56E-10	-3.31E-7	3.65E-7
POCP	kg ethene-eq	8.10E-4	1.11E-5	2.82E-5	8.49E-4	9.71E-6	1.01E-4	1.20E-6	-3.82E-4	5.79E-4
AP	kg SO2-eq	5.08E-3	8.10E-5	2.79E-4	5.44E-3	6.97E-5	7.25E-4	3.51E-6	-2.40E-3	3.84E-3
EP	kg PO4 3--eq	6.45E-4	1.59E-5	3.59E-5	6.96E-4	1.39E-5	1.12E-4	1.53E-6	-3.23E-4	5.01E-4
HTP	kg 1,4-DB-eq	4.78E-1	7.75E-3	3.02E-2	5.16E-1	6.92E-3	1.96E-1	3.82E-4	-2.21E-1	4.98E-1
FAETP	kg 1,4-DB-eq	1.44E-2	2.26E-4	1.03E-3	1.57E-2	2.03E-4	3.04E-3	1.52E-4	-6.33E-3	1.27E-2
MAETP	kg 1,4-DB-eq	3.39E+1	8.14E-1	4.06E+0	3.88E+1	7.25E-1	1.01E+1	1.75E-1	-1.43E+1	3.55E+1
TETP	kg 1,4-DB-eq	3.38E-3	2.74E-5	2.24E-3	5.65E-3	2.45E-5	6.87E-4	1.21E-6	-2.10E-3	4.27E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.32E+0	1.86E-2	7.43E-2	1.41E+0	1.63E-2	4.91E-1	5.49E-3	-6.72E-1	1.25E+0
GWP-f	kg CO2 eq	1.31E+0	1.86E-2	5.71E-2	1.38E+0	1.63E-2	4.62E-1	5.49E-3	-7.33E-1	1.13E+0
GWP-b	kg CO2 eq	1.06E-2	8.57E-6	1.18E-2	2.24E-2	9.91E-6	2.87E-2	6.59E-6	6.22E-2	1.13E-1
GWP-luluc	kg CO2 eq	1.41E-3	6.80E-6	5.42E-3	6.84E-3	5.78E-6	1.91E-4	1.36E-7	-8.91E-4	6.15E-3
ODP	kg CFC11 eq	6.30E-7	4.10E-9	6.04E-9	6.40E-7	3.76E-9	5.13E-8	1.93E-10	-3.28E-7	3.68E-7
AP	mol H+ eq	6.18E-3	1.08E-4	3.48E-4	6.64E-3	9.30E-5	9.12E-4	4.70E-6	-2.91E-3	4.74E-3
EP-fw	kg P eq	5.92E-5	1.87E-7	1.00E-6	6.04E-5	1.34E-7	6.35E-6	6.15E-9	-3.00E-5	3.69E-5
EP-m	kg N eq	1.10E-3	3.79E-5	8.23E-5	1.22E-3	3.33E-5	2.27E-4	3.22E-6	-5.21E-4	9.59E-4
EP-T	mol N eq	1.19E-2	4.18E-4	9.07E-4	1.32E-2	3.67E-4	2.50E-3	1.88E-5	-5.62E-3	1.05E-2
POCP	kg NMVOC eq	4.00E-3	1.19E-4	2.58E-4	4.38E-3	1.05E-4	7.50E-4	6.53E-6	-1.91E-3	3.33E-3
ADP-mm	kg Sb eq	1.14E-3	4.70E-7	1.99E-6	1.15E-3	4.22E-7	3.61E-6	4.70E-9	-1.39E-5	1.14E-3
ADP-f	MJ	3.41E+1	2.80E-1	6.39E-1	3.50E+1	2.51E-1	2.49E+0	1.41E-2	-1.81E+1	1.97E+1
WDP	m3 depriv.	1.97E+0	1.00E-3	4.94E-1	2.47E+0	7.69E-4	9.43E-2	8.81E-5	-1.05E+0	1.51E+0
PM	disease inc.	4.51E-8	1.67E-9	4.30E-9	5.11E-8	1.47E-9	1.16E-8	9.72E-11	-2.31E-8	4.11E-8
IR	kBq U-235 eq	7.41E-2	1.17E-3	1.02E-3	7.63E-2	1.09E-3	8.72E-3	6.51E-5	-3.47E-2	5.15E-2
ETP-fw	CTUe	3.77E+1	2.50E-1	1.48E+0	3.94E+1	2.03E-1	1.79E+1	1.97E-1	-1.41E+1	4.36E+1
HTP-c	CTUh	9.96E-10	8.10E-12	5.13E-11	1.06E-9	7.24E-12	2.80E-10	3.85E-13	-3.86E-10	9.57E-10
HTP-nc	CTUh	3.24E-8	2.73E-10	1.60E-9	3.43E-8	2.43E-10	6.48E-9	3.86E-11	-1.33E-8	2.77E-8
SQP	Pt	6.90E+0	2.43E-1	4.77E-2	7.19E+0	2.14E-1	1.56E+0	3.62E-2	-1.37E+1	-4.68E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.10E+0	3.51E-3	3.11E+0	5.21E+0	3.59E-3	1.75E-1	5.35E-4	-2.87E+0	2.52E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.10E+0	3.51E-3	3.11E+0	5.21E+0	3.59E-3	1.75E-1	5.35E-4	-2.87E+0	2.52E+0
PENRE	MJ	3.65E+1	2.97E-1	6.90E-1	3.75E+1	2.66E-1	2.65E+0	1.50E-2	-1.94E+1	2.10E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.65E+1	2.97E-1	6.90E-1	3.75E+1	2.66E-1	2.65E+0	1.50E-2	-1.94E+1	2.10E+1
PET	MJ	3.86E+1	3.01E-1	3.80E+0	4.27E+1	2.70E-1	2.82E+0	1.55E-2	-2.23E+1	2.35E+1
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	2.33E-2	3.41E-5	1.17E-2	3.50E-2	2.83E-5	2.61E-3	1.73E-5	-1.26E-2	2.51E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.62E-4	7.10E-7	6.78E-7	1.63E-4	6.41E-7	4.09E-6	1.72E-8	-1.41E-5	1.54E-4
NHWD	kg	1.28E-1	1.78E-2	1.05E-3	1.47E-1	1.55E-2	9.29E-2	6.21E-2	-5.58E-2	2.61E-1
RWD	kg	6.79E-5	1.84E-6	1.26E-6	7.10E-5	1.70E-6	9.48E-6	9.19E-8	-3.09E-5	5.14E-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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