

Environmental Profile

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

Ecochain v3.5.80



Product: 3001301 - Wafix PVC Bend 30° 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	0.1	0	0.01	0.11	0	0.03	0	-0.05	0.09
ADPE	kg Sb-eq	7.71E-4	3.36E-7	1.36E-6	7.73E-4	3.00E-7	2.48E-6	3.34E-9	-9.60E-6	7.66E-4
ADPF	kg Sb-eq	1.16E-2	9.66E-5	2.34E-4	1.19E-2	8.44E-5	8.67E-4	4.63E-6	-6.16E-3	6.71E-3
GWP	kg CO2-eq	9.03E-1	1.31E-2	4.44E-2	9.60E-1	1.15E-2	3.27E-1	3.42E-3	-5.07E-1	7.95E-1
ODP	kg CFC-11-eq	4.28E-7	2.33E-9	3.51E-9	4.33E-7	2.13E-9	3.33E-8	1.11E-10	-2.26E-7	2.43E-7
POCP	kg ethene-eq	5.97E-4	7.93E-6	1.93E-5	6.24E-4	6.89E-6	7.05E-5	8.60E-7	-2.72E-4	4.30E-4
AP	kg SO2-eq	3.59E-3	5.78E-5	1.91E-4	3.84E-3	4.94E-5	4.98E-4	2.49E-6	-1.67E-3	2.72E-3
EP	kg PO4 3--eq	4.47E-4	1.13E-5	2.46E-5	4.83E-4	9.87E-6	7.71E-5	1.13E-6	-2.19E-4	3.52E-4
HTP	kg 1,4-DB-eq	3.33E-1	5.53E-3	2.06E-2	3.59E-1	4.91E-3	1.37E-1	2.75E-4	-1.52E-1	3.49E-1
FAETP	kg 1,4-DB-eq	9.77E-3	1.61E-4	7.05E-4	1.06E-2	1.44E-4	2.14E-3	1.19E-4	-4.21E-3	8.83E-3
MAETP	kg 1,4-DB-eq	2.36E+1	5.81E-1	2.78E+0	2.69E+1	5.14E-1	6.97E+0	1.35E-1	-9.80E+0	2.47E+1
TETP	kg 1,4-DB-eq	2.29E-3	1.96E-5	1.53E-3	3.84E-3	1.74E-5	4.78E-4	8.49E-7	-1.39E-3	2.95E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.33E-1	1.33E-2	5.08E-2	9.97E-1	1.16E-2	3.47E-1	3.99E-3	-4.82E-1	8.77E-1
GWP-f	kg CO2 eq	9.25E-1	1.32E-2	3.91E-2	9.78E-1	1.16E-2	3.29E-1	3.99E-3	-5.19E-1	8.04E-1
GWP-b	kg CO2 eq	6.70E-3	6.12E-6	8.06E-3	1.48E-2	7.03E-6	1.72E-2	4.69E-6	3.70E-2	6.90E-2
GWP-luluc	kg CO2 eq	9.42E-4	4.85E-6	3.71E-3	4.66E-3	4.10E-6	1.31E-4	9.61E-8	-5.74E-4	4.22E-3
ODP	kg CFC11 eq	4.25E-7	2.92E-9	4.13E-9	4.32E-7	2.67E-9	3.46E-8	1.37E-10	-2.24E-7	2.46E-7
AP	mol H+ eq	4.35E-3	7.68E-5	2.38E-4	4.67E-3	6.60E-5	6.27E-4	3.33E-6	-2.02E-3	3.35E-3
EP-fw	kg P eq	4.06E-5	1.34E-7	6.84E-7	4.14E-5	9.53E-8	4.33E-6	4.36E-9	-2.02E-5	2.56E-5
EP-m	kg N eq	7.62E-4	2.71E-5	5.63E-5	8.46E-4	2.36E-5	1.56E-4	2.38E-6	-3.60E-4	6.68E-4
EP-T	mol N eq	8.29E-3	2.99E-4	6.20E-4	9.21E-3	2.60E-4	1.72E-3	1.33E-5	-3.88E-3	7.32E-3
POCP	kg NMVOC eq	2.87E-3	8.52E-5	1.77E-4	3.13E-3	7.44E-5	5.19E-4	4.65E-6	-1.34E-3	2.39E-3
ADP-mm	kg Sb eq	7.71E-4	3.36E-7	1.36E-6	7.73E-4	3.00E-7	2.48E-6	3.34E-9	-9.60E-6	7.66E-4
ADP-f	MJ	2.46E+1	2.00E-1	4.37E-1	2.53E+1	1.78E-1	1.72E+0	1.00E-2	-1.29E+1	1.42E+1
WDP	m3 depriv.	1.35E+0	7.15E-4	3.38E-1	1.69E+0	5.46E-4	6.41E-2	6.15E-5	-7.21E-1	1.03E+0
PM	disease inc.	3.24E-8	1.19E-9	2.94E-9	3.65E-8	1.05E-9	8.02E-9	6.89E-11	-1.57E-8	3.00E-8
IR	kBq U-235 eq	5.25E-2	8.37E-4	6.94E-4	5.40E-2	7.77E-4	5.99E-3	4.63E-5	-2.36E-2	3.72E-2
ETP-fw	CTUe	2.52E+1	1.78E-1	1.01E+0	2.64E+1	1.44E-1	1.20E+1	1.32E-1	-9.33E+0	2.93E+1
HTP-c	CTUh	6.81E-10	5.78E-12	3.51E-11	7.22E-10	5.14E-12	1.94E-10	2.72E-13	-2.64E-10	6.58E-10
HTP-nc	CTUh	2.20E-8	1.95E-10	1.10E-9	2.33E-8	1.72E-10	4.42E-9	2.61E-11	-9.06E-9	1.88E-8
SQP	Pt	4.61E+0	1.73E-1	3.27E-2	4.82E+0	1.52E-1	1.09E+0	2.57E-2	-8.39E+0	-2.30E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.42E+0	2.50E-3	2.12E+0	3.54E+0	2.55E-3	1.20E-1	3.82E-4	-1.79E+0	1.87E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.42E+0	2.50E-3	2.12E+0	3.54E+0	2.55E-3	1.20E-1	3.82E-4	-1.79E+0	1.87E+0
PENRE	MJ	2.64E+1	2.12E-1	4.72E-1	2.71E+1	1.89E-1	1.83E+0	1.06E-2	-1.39E+1	1.52E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.64E+1	2.12E-1	4.72E-1	2.71E+1	1.89E-1	1.83E+0	1.06E-2	-1.39E+1	1.52E+1
PET	MJ	2.78E+1	2.15E-1	2.60E+0	3.06E+1	1.91E-1	1.95E+0	1.10E-2	-1.57E+1	1.71E+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	1.63E-2	2.43E-5	7.99E-3	2.43E-2	2.01E-5	1.78E-3	1.23E-5	-8.58E-3	1.75E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.08E-4	5.06E-7	4.64E-7	1.09E-4	4.55E-7	2.83E-6	1.22E-8	-9.70E-6	1.02E-4
NHWD	kg	8.75E-2	1.27E-2	7.16E-4	1.01E-1	1.10E-2	6.52E-2	4.40E-2	-3.81E-2	1.83E-1
RWD	kg	4.90E-5	1.31E-6	8.60E-7	5.12E-5	1.21E-6	6.55E-6	6.53E-8	-2.10E-5	3.80E-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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