

Environmental Profile

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

Ecochain v3.5.80



Product: 3001285 - Wafix PVC Bend 88° GY 125 SN4 S/SP
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	0.04	0	-0.07	0.12
ADPE	kg Sb-eq	1.17E-3	4.46E-7	2.02E-6	1.17E-3	4.07E-7	3.60E-6	4.54E-9	-1.38E-5	1.16E-3
ADPF	kg Sb-eq	1.50E-2	1.28E-4	3.47E-4	1.55E-2	1.15E-4	1.24E-3	6.30E-6	-8.14E-3	8.71E-3
GWP	kg CO2-eq	1.23E+0	1.75E-2	6.59E-2	1.31E+0	1.56E-2	4.39E-1	4.42E-3	-6.90E-1	1.08E+0
ODP	kg CFC-11-eq	6.49E-7	3.10E-9	5.21E-9	6.57E-7	2.90E-9	5.06E-8	1.50E-10	-3.33E-7	3.78E-7
POCP	kg ethene-eq	7.42E-4	1.05E-5	2.86E-5	7.81E-4	9.37E-6	9.96E-5	1.13E-6	-3.64E-4	5.27E-4
AP	kg SO2-eq	4.91E-3	7.68E-5	2.83E-4	5.27E-3	6.72E-5	7.23E-4	3.39E-6	-2.34E-3	3.72E-3
EP	kg PO4 3--eq	6.29E-4	1.51E-5	3.64E-5	6.80E-4	1.34E-5	1.11E-4	1.41E-6	-3.18E-4	4.88E-4
HTP	kg 1,4-DB-eq	4.70E-1	7.35E-3	3.06E-2	5.08E-1	6.68E-3	1.92E-1	3.62E-4	-2.19E-1	4.87E-1
FAETP	kg 1,4-DB-eq	1.43E-2	2.15E-4	1.05E-3	1.55E-2	1.96E-4	2.95E-3	1.29E-4	-6.29E-3	1.25E-2
MAETP	kg 1,4-DB-eq	3.32E+1	7.72E-1	4.12E+0	3.81E+1	6.99E-1	9.99E+0	1.52E-1	-1.42E+1	3.48E+1
TETP	kg 1,4-DB-eq	3.41E-3	2.60E-5	2.28E-3	5.71E-3	2.37E-5	6.77E-4	1.18E-6	-2.09E-3	4.32E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.27E+0	1.76E-2	7.54E-2	1.36E+0	1.58E-2	4.71E-1	5.15E-3	-6.44E-1	1.21E+0
GWP-f	kg CO2 eq	1.26E+0	1.76E-2	5.80E-2	1.33E+0	1.57E-2	4.42E-1	5.15E-3	-7.05E-1	1.09E+0
GWP-b	kg CO2 eq	1.13E-2	8.13E-6	1.20E-2	2.33E-2	9.56E-6	2.88E-2	6.34E-6	6.22E-2	1.14E-1
GWP-luluc	kg CO2 eq	1.40E-3	6.45E-6	5.50E-3	6.91E-3	5.57E-6	1.91E-4	1.31E-7	-8.88E-4	6.22E-3
ODP	kg CFC11 eq	6.42E-7	3.89E-9	6.13E-9	6.52E-7	3.63E-9	5.23E-8	1.86E-10	-3.29E-7	3.78E-7
AP	mol H+ eq	5.97E-3	1.02E-4	3.53E-4	6.43E-3	8.97E-5	9.08E-4	4.53E-6	-2.83E-3	4.60E-3
EP-fw	kg P eq	5.89E-5	1.78E-7	1.02E-6	6.01E-5	1.30E-7	6.39E-6	5.93E-9	-2.98E-5	3.68E-5
EP-m	kg N eq	1.07E-3	3.60E-5	8.35E-5	1.19E-3	3.21E-5	2.24E-4	2.97E-6	-5.08E-4	9.39E-4
EP-T	mol N eq	1.15E-2	3.97E-4	9.20E-4	1.28E-2	3.54E-4	2.47E-3	1.81E-5	-5.47E-3	1.02E-2
POCP	kg NMVOC eq	3.78E-3	1.13E-4	2.62E-4	4.16E-3	1.01E-4	7.40E-4	6.26E-6	-1.84E-3	3.17E-3
ADP-mm	kg Sb eq	1.17E-3	4.46E-7	2.02E-6	1.17E-3	4.07E-7	3.60E-6	4.54E-9	-1.38E-5	1.16E-3
ADP-f	MJ	3.20E+1	2.66E-1	6.48E-1	3.29E+1	2.42E-1	2.46E+0	1.36E-2	-1.72E+1	1.85E+1
WDP	m3 depriv.	1.98E+0	9.50E-4	5.01E-1	2.48E+0	7.42E-4	9.54E-2	8.65E-5	-1.04E+0	1.53E+0
PM	disease inc.	4.22E-8	1.58E-9	4.36E-9	4.81E-8	1.42E-9	1.14E-8	9.37E-11	-2.24E-8	3.86E-8
IR	kBq U-235 eq	7.14E-2	1.11E-3	1.03E-3	7.35E-2	1.06E-3	8.68E-3	6.27E-5	-3.45E-2	4.88E-2
ETP-fw	CTUe	3.77E+1	2.37E-1	1.50E+0	3.94E+1	1.96E-1	1.85E+1	2.03E-1	-1.41E+1	4.42E+1
HTP-c	CTUh	9.98E-10	7.68E-12	5.21E-11	1.06E-9	6.98E-12	2.76E-10	3.74E-13	-3.84E-10	9.57E-10
HTP-nc	CTUh	3.27E-8	2.59E-10	1.63E-9	3.46E-8	2.34E-10	6.52E-9	3.94E-11	-1.32E-8	2.81E-8
SQP	Pt	6.74E+0	2.30E-1	4.84E-2	7.02E+0	2.07E-1	1.52E+0	3.49E-2	-1.37E+1	-4.88E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.07E+0	3.33E-3	3.15E+0	5.23E+0	3.47E-3	1.76E-1	5.12E-4	-2.86E+0	2.55E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.07E+0	3.33E-3	3.15E+0	5.23E+0	3.47E-3	1.76E-1	5.12E-4	-2.86E+0	2.55E+0
PENRE	MJ	3.43E+1	2.82E-1	7.00E-1	3.53E+1	2.57E-1	2.62E+0	1.45E-2	-1.85E+1	1.97E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.43E+1	2.82E-1	7.00E-1	3.53E+1	2.57E-1	2.62E+0	1.45E-2	-1.85E+1	1.97E+1
PET	MJ	3.64E+1	2.85E-1	3.85E+0	4.05E+1	2.60E-1	2.80E+0	1.50E-2	-2.13E+1	2.23E+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	2.28E-2	3.24E-5	1.19E-2	3.47E-2	2.73E-5	2.63E-3	1.67E-5	-1.24E-2	2.49E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.67E-4	6.73E-7	6.88E-7	1.68E-4	6.18E-7	4.04E-6	1.66E-8	-1.39E-5	1.59E-4
NHWD	kg	1.27E-1	1.69E-2	1.06E-3	1.45E-1	1.50E-2	9.04E-2	5.99E-2	-5.54E-2	2.55E-1
RWD	kg	6.38E-5	1.74E-6	1.28E-6	6.68E-5	1.64E-6	9.37E-6	8.86E-8	-3.07E-5	4.72E-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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