

Environmental Profile

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

Ecochain v3.5.80



Product: 3024546 - WfxPVC Bend 15° 125 GY/GD SN8 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	0.09	0	0.01	0.1	0	0.03	0	-0.05	0.08
ADPE	kg Sb-eq	7.63E-4	2.98E-7	1.27E-6	7.64E-4	2.74E-7	2.36E-6	3.05E-9	-9.09E-6	7.58E-4
ADPF	kg Sb-eq	1.02E-2	8.58E-5	2.18E-4	1.05E-2	7.71E-5	8.20E-4	4.23E-6	-5.49E-3	5.90E-3
GWP	kg CO2-eq	8.18E-1	1.17E-2	4.13E-2	8.71E-1	1.05E-2	2.96E-1	3.01E-3	-4.59E-1	7.21E-1
ODP	kg CFC-11-eq	4.22E-7	2.07E-9	3.26E-9	4.28E-7	1.95E-9	3.29E-8	1.01E-10	-2.18E-7	2.44E-7
POCP	kg ethene-eq	5.08E-4	7.04E-6	1.79E-5	5.33E-4	6.30E-6	6.57E-5	7.69E-7	-2.43E-4	3.64E-4
AP	kg SO2-eq	3.26E-3	5.13E-5	1.77E-4	3.49E-3	4.52E-5	4.74E-4	2.28E-6	-1.53E-3	2.49E-3
EP	kg PO4 3--eq	4.11E-4	1.01E-5	2.28E-5	4.43E-4	9.02E-6	7.26E-5	9.70E-7	-2.02E-4	3.24E-4
HTP	kg 1,4-DB-eq	3.10E-1	4.91E-3	1.92E-2	3.34E-1	4.49E-3	1.27E-1	2.46E-4	-1.43E-1	3.23E-1
FAETP	kg 1,4-DB-eq	9.13E-3	1.43E-4	6.55E-4	9.93E-3	1.32E-4	1.96E-3	9.30E-5	-3.90E-3	8.22E-3
MAETP	kg 1,4-DB-eq	2.19E+1	5.16E-1	2.58E+0	2.50E+1	4.70E-1	6.54E+0	1.08E-1	-9.22E+0	2.29E+1
TETP	kg 1,4-DB-eq	2.20E-3	1.74E-5	1.43E-3	3.65E-3	1.59E-5	4.49E-4	7.89E-7	-1.29E-3	2.82E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.46E-1	1.18E-2	4.72E-2	9.05E-1	1.06E-2	3.13E-1	3.51E-3	-4.38E-1	7.93E-1
GWP-f	kg CO2 eq	8.38E-1	1.18E-2	3.63E-2	8.86E-1	1.06E-2	2.98E-1	3.51E-3	-4.70E-1	7.28E-1
GWP-b	kg CO2 eq	7.08E-3	5.43E-6	7.49E-3	1.46E-2	6.43E-6	1.50E-2	4.27E-6	3.19E-2	6.14E-2
GWP-luluc	kg CO2 eq	8.77E-4	4.31E-6	3.45E-3	4.33E-3	3.75E-6	1.26E-4	8.80E-8	-5.23E-4	3.93E-3
ODP	kg CFC11 eq	4.18E-7	2.60E-9	3.84E-9	4.25E-7	2.44E-9	3.40E-8	1.25E-10	-2.16E-7	2.45E-7
AP	mol H+ eq	3.97E-3	6.82E-5	2.21E-4	4.25E-3	6.03E-5	5.96E-4	3.05E-6	-1.85E-3	3.06E-3
EP-fw	kg P eq	3.84E-5	1.19E-7	6.36E-7	3.92E-5	8.71E-8	4.19E-6	3.99E-9	-1.90E-5	2.45E-5
EP-m	kg N eq	6.99E-4	2.40E-5	5.23E-5	7.75E-4	2.16E-5	1.47E-4	2.04E-6	-3.30E-4	6.16E-4
EP-T	mol N eq	7.57E-3	2.65E-4	5.77E-4	8.41E-3	2.38E-4	1.62E-3	1.22E-5	-3.55E-3	6.74E-3
POCP	kg NMVOC eq	2.54E-3	7.57E-5	1.64E-4	2.78E-3	6.79E-5	4.86E-4	4.22E-6	-1.21E-3	2.13E-3
ADP-mm	kg Sb eq	7.63E-4	2.98E-7	1.27E-6	7.64E-4	2.74E-7	2.36E-6	3.05E-9	-9.09E-6	7.58E-4
ADP-f	MJ	2.17E+1	1.77E-1	4.06E-1	2.23E+1	1.62E-1	1.63E+0	9.16E-3	-1.15E+1	1.25E+1
WDP	m3 depriv.	1.30E+0	6.35E-4	3.14E-1	1.61E+0	4.98E-4	6.25E-2	5.77E-5	-6.77E-1	9.99E-1
PM	disease inc.	2.81E-8	1.06E-9	2.73E-9	3.19E-8	9.55E-10	7.50E-9	6.30E-11	-1.42E-8	2.63E-8
IR	kBq U-235 eq	4.76E-2	7.44E-4	6.45E-4	4.90E-2	7.10E-4	5.70E-3	4.22E-5	-2.23E-2	3.32E-2
ETP-fw	CTUe	2.37E+1	1.58E-1	9.43E-1	2.48E+1	1.32E-1	1.20E+1	1.32E-1	-8.62E+0	2.85E+1
HTP-c	CTUh	6.53E-10	5.13E-12	3.26E-11	6.90E-10	4.69E-12	1.82E-10	2.50E-13	-2.49E-10	6.29E-10
HTP-nc	CTUh	2.13E-8	1.73E-10	1.02E-9	2.25E-8	1.57E-10	4.27E-9	2.57E-11	-8.57E-9	1.84E-8
SQP	Pt	4.13E+0	1.54E-1	3.03E-2	4.31E+0	1.39E-1	1.01E+0	2.34E-2	-7.37E+0	-1.89E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.30E+0	2.22E-3	1.97E+0	3.28E+0	2.33E-3	1.15E-1	3.46E-4	-1.59E+0	1.80E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.30E+0	2.22E-3	1.97E+0	3.28E+0	2.33E-3	1.15E-1	3.46E-4	-1.59E+0	1.80E+0
PENRE	MJ	2.32E+1	1.88E-1	4.39E-1	2.39E+1	1.72E-1	1.73E+0	9.71E-3	-1.24E+1	1.34E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.32E+1	1.88E-1	4.39E-1	2.39E+1	1.72E-1	1.73E+0	9.71E-3	-1.24E+1	1.34E+1
PET	MJ	2.45E+1	1.91E-1	2.41E+0	2.71E+1	1.75E-1	1.85E+0	1.01E-2	-1.40E+1	1.52E+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	1.51E-2	2.16E-5	7.43E-3	2.25E-2	1.84E-5	1.72E-3	1.12E-5	-7.92E-3	1.64E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.08E-4	4.50E-7	4.31E-7	1.09E-4	4.15E-7	2.66E-6	1.11E-8	-9.13E-6	1.03E-4
NHWD	kg	8.25E-2	1.13E-2	6.65E-4	9.45E-2	1.01E-2	6.01E-2	4.02E-2	-3.60E-2	1.69E-1
RWD	kg	4.31E-5	1.17E-6	7.99E-7	4.50E-5	1.10E-6	6.17E-6	5.96E-8	-1.98E-5	3.26E-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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