

Environmental Profile

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

Ecochain v3.5.80



Product: 3003986 - PVC RWA Pipe GY KOMO 100x1.8 L=4
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	0.71	0.02	0.03	0.76	0.01	0.26	0	-0.35	0.67
ADPE	kg Sb-eq	1.80E-4	4.50E-6	5.88E-6	1.90E-4	2.50E-6	2.09E-5	2.59E-8	-7.40E-5	1.39E-4
ADPF	kg Sb-eq	7.83E-2	1.30E-3	1.58E-3	8.12E-2	7.03E-4	7.37E-3	3.66E-5	-4.16E-2	4.77E-2
GWP	kg CO2-eq	6.35E+0	1.76E-1	2.80E-1	6.80E+0	9.58E-2	2.43E+0	2.30E-2	-3.51E+0	5.84E+0
ODP	kg CFC-11-eq	3.72E-6	3.13E-8	2.63E-8	3.77E-6	1.78E-8	2.96E-7	8.80E-10	-1.83E-6	2.25E-6
POCP	kg ethene-eq	3.92E-3	1.06E-4	1.23E-4	4.15E-3	5.75E-5	5.84E-4	6.13E-6	-1.81E-3	2.99E-3
AP	kg SO2-eq	2.46E-2	7.75E-4	1.10E-3	2.65E-2	4.12E-4	4.25E-3	1.95E-5	-1.16E-2	1.95E-2
EP	kg PO4 3--eq	2.98E-3	1.52E-4	1.74E-4	3.31E-3	8.23E-5	6.46E-4	7.50E-6	-1.43E-3	2.61E-3
HTP	kg 1,4-DB-eq	2.49E+0	7.42E-2	1.06E-1	2.67E+0	4.10E-2	1.14E+0	2.00E-3	-1.13E+0	2.72E+0
FAETP	kg 1,4-DB-eq	5.42E-2	2.17E-3	4.31E-3	6.07E-2	1.20E-3	1.67E-2	5.86E-4	-2.46E-2	5.45E-2
MAETP	kg 1,4-DB-eq	1.58E+2	7.79E+0	1.76E+1	1.83E+2	4.29E+0	5.51E+1	7.20E-1	-7.21E+1	1.71E+2
TETP	kg 1,4-DB-eq	1.73E-2	2.62E-4	6.57E-3	2.42E-2	1.45E-4	4.05E-3	6.62E-6	-8.19E-3	2.02E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.69E+0	1.78E-1	3.30E-1	6.19E+0	9.66E-2	3.32E+0	2.67E-2	-3.61E+0	6.03E+0
GWP-f	kg CO2 eq	6.51E+0	1.78E-1	2.58E-1	6.95E+0	9.65E-2	2.44E+0	2.67E-2	-3.59E+0	5.93E+0
GWP-b	kg CO2 eq	-8.28E-1	8.20E-5	5.59E-2	-7.72E-1	5.86E-5	8.77E-1	3.46E-5	-2.52E-2	8.00E-2
GWP-luluc	kg CO2 eq	5.46E-3	6.51E-5	1.58E-2	2.13E-2	3.42E-5	1.14E-3	7.26E-7	-2.46E-3	2.00E-2
ODP	kg CFC11 eq	3.66E-6	3.92E-8	3.12E-8	3.74E-6	2.22E-8	3.05E-7	1.09E-9	-1.81E-6	2.25E-6
AP	mol H+ eq	2.97E-2	1.03E-3	1.41E-3	3.21E-2	5.50E-4	5.33E-3	2.61E-5	-1.41E-2	2.40E-2
EP-fw	kg P eq	2.89E-4	1.79E-6	3.70E-6	2.94E-4	7.94E-7	3.78E-5	3.28E-8	-1.35E-4	1.98E-4
EP-m	kg N eq	5.07E-3	3.63E-4	4.15E-4	5.85E-3	1.97E-4	1.31E-3	1.59E-5	-2.47E-3	4.90E-3
EP-T	mol N eq	5.52E-2	4.00E-3	4.46E-3	6.36E-2	2.17E-3	1.44E-2	1.05E-4	-2.69E-2	5.34E-2
POCP	kg NMVOC eq	1.89E-2	1.14E-3	1.26E-3	2.13E-2	6.20E-4	4.32E-3	3.55E-5	-9.04E-3	1.72E-2
ADP-mm	kg Sb eq	1.80E-4	4.50E-6	5.88E-6	1.90E-4	2.50E-6	2.09E-5	2.59E-8	-7.40E-5	1.39E-4
ADP-f	MJ	1.67E+2	2.68E+0	2.99E+0	1.72E+2	1.48E+0	1.46E+1	7.92E-2	-8.72E+1	1.01E+2
WDP	m3 depriv.	1.09E+1	9.59E-3	2.02E+0	1.30E+1	4.55E-3	5.64E-1	4.38E-4	-5.21E+0	8.34E+0
PM	disease inc.	2.34E-7	1.60E-8	2.19E-8	2.72E-7	8.71E-9	6.69E-8	5.42E-10	-9.34E-8	2.55E-7
IR	kBq U-235 eq	3.57E-1	1.12E-2	5.40E-3	3.74E-1	6.48E-3	5.10E-2	3.63E-4	-1.69E-1	2.63E-1
ETP-fw	CTUe	1.12E+2	2.39E+0	4.99E+0	1.19E+2	1.20E+0	1.08E+2	1.19E+0	-5.41E+1	1.75E+2
HTP-c	CTUh	4.60E-9	7.75E-11	1.70E-10	4.85E-9	4.28E-11	1.62E-9	2.05E-12	-1.96E-9	4.56E-9
HTP-nc	CTUh	1.43E-7	2.61E-9	5.21E-9	1.51E-7	1.43E-9	3.83E-8	2.28E-10	-6.75E-8	1.23E-7
SQP	Pt	1.00E+2	2.32E+0	2.24E-1	1.03E+2	1.27E+0	9.15E+0	2.01E-1	-2.63E+1	8.71E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.99E+1	3.35E-2	9.02E+0	2.90E+1	2.13E-2	1.04E+0	2.84E-3	-7.22E+0	2.28E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.99E+1	3.35E-2	9.02E+0	2.90E+1	2.13E-2	1.04E+0	2.84E-3	-7.22E+0	2.28E+1
PENRE	MJ	1.79E+2	2.85E+0	3.24E+0	1.85E+2	1.57E+0	1.55E+1	8.40E-2	-9.39E+1	1.08E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.79E+2	2.85E+0	3.24E+0	1.85E+2	1.57E+0	1.55E+1	8.40E-2	-9.39E+1	1.08E+2
PET	MJ	1.99E+2	2.88E+0	1.23E+1	2.14E+2	1.59E+0	1.66E+1	8.69E-2	-1.01E+2	1.31E+2
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	1.17E-1	3.26E-4	4.76E-2	1.65E-1	1.68E-4	1.55E-2	9.71E-5	-5.45E-2	1.26E-1
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.36E-4	6.79E-6	4.19E-6	1.47E-4	3.79E-6	2.35E-5	9.53E-8	-7.28E-5	1.02E-4
NHWD	kg	6.53E-1	1.70E-1	6.04E-3	8.29E-1	9.18E-2	5.51E-1	3.67E-1	-2.84E-1	1.55E+0
RWD	kg	3.15E-4	1.76E-5	7.53E-6	3.40E-4	1.01E-5	5.49E-5	5.18E-7	-1.49E-4	2.56E-4
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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