

Environmental Profile

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

Ecochain v3.5.80



Product: 3004073 - PVC RWA Pipe Slv GY KOMO 80x1.5 L=6
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	0.76	0.02	0.03	0.8	0.01	0.26	0	-0.36	0.71
ADPE	kg Sb-eq	1.78E-4	3.80E-6	5.69E-6	1.87E-4	2.42E-6	2.07E-5	2.56E-8	-7.50E-5	1.36E-4
ADPF	kg Sb-eq	8.39E-2	1.09E-3	1.52E-3	8.65E-2	6.81E-4	7.26E-3	3.61E-5	-4.29E-2	5.15E-2
GWP	kg CO2-eq	6.99E+0	1.49E-1	2.71E-1	7.41E+0	9.27E-2	2.52E+0	2.33E-2	-3.62E+0	6.41E+0
ODP	kg CFC-11-eq	3.66E-6	2.64E-8	2.55E-8	3.71E-6	1.72E-8	2.97E-7	8.66E-10	-1.86E-6	2.17E-6
POCP	kg ethene-eq	4.63E-3	8.97E-5	1.19E-4	4.84E-3	5.56E-5	5.73E-4	6.16E-6	-1.86E-3	3.62E-3
AP	kg SO2-eq	2.77E-2	6.53E-4	1.06E-3	2.94E-2	3.99E-4	4.21E-3	1.93E-5	-1.18E-2	2.22E-2
EP	kg PO4 3--eq	3.27E-3	1.28E-4	1.68E-4	3.56E-3	7.97E-5	6.38E-4	7.52E-6	-1.45E-3	2.84E-3
HTP	kg 1,4-DB-eq	2.49E+0	6.26E-2	1.02E-1	2.66E+0	3.97E-2	1.12E+0	2.00E-3	-1.14E+0	2.67E+0
FAETP	kg 1,4-DB-eq	5.46E-2	1.83E-3	4.16E-3	6.05E-2	1.16E-3	1.70E-2	6.11E-4	-2.49E-2	5.44E-2
MAETP	kg 1,4-DB-eq	1.59E+2	6.57E+0	1.70E+1	1.82E+2	4.15E+0	5.57E+1	7.43E-1	-7.31E+1	1.70E+2
TETP	kg 1,4-DB-eq	1.72E-2	2.21E-4	6.35E-3	2.38E-2	1.41E-4	3.98E-3	6.63E-6	-8.28E-3	1.96E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.45E+0	1.50E-1	3.19E-1	6.92E+0	9.36E-2	3.31E+0	2.72E-2	-3.74E+0	6.62E+0
GWP-f	kg CO2 eq	7.18E+0	1.50E-1	2.50E-1	7.58E+0	9.35E-2	2.54E+0	2.72E-2	-3.71E+0	6.53E+0
GWP-b	kg CO2 eq	-7.28E-1	6.92E-5	5.40E-2	-6.74E-1	5.68E-5	7.76E-1	3.49E-5	-2.57E-2	7.64E-2
GWP-luluc	kg CO2 eq	5.42E-3	5.49E-5	1.52E-2	2.07E-2	3.31E-5	1.13E-3	7.22E-7	-2.49E-3	1.94E-2
ODP	kg CFC11 eq	3.61E-6	3.31E-8	3.02E-8	3.67E-6	2.15E-8	3.06E-7	1.08E-9	-1.84E-6	2.16E-6
AP	mol H+ eq	3.33E-2	8.69E-4	1.36E-3	3.55E-2	5.33E-4	5.28E-3	2.58E-5	-1.43E-2	2.71E-2
EP-fw	kg P eq	3.07E-4	1.51E-6	3.57E-6	3.13E-4	7.69E-7	3.76E-5	3.27E-8	-1.36E-4	2.15E-4
EP-m	kg N eq	5.71E-3	3.06E-4	4.02E-4	6.42E-3	1.91E-4	1.29E-3	1.59E-5	-2.51E-3	5.40E-3
EP-T	mol N eq	5.98E-2	3.38E-3	4.31E-3	6.75E-2	2.10E-3	1.43E-2	1.03E-4	-2.73E-2	5.67E-2
POCP	kg NMVOC eq	2.14E-2	9.64E-4	1.22E-3	2.36E-2	6.00E-4	4.26E-3	3.52E-5	-9.23E-3	1.93E-2
ADP-mm	kg Sb eq	1.78E-4	3.80E-6	5.69E-6	1.87E-4	2.42E-6	2.07E-5	2.56E-8	-7.50E-5	1.36E-4
ADP-f	MJ	1.78E+2	2.26E+0	2.89E+0	1.83E+2	1.44E+0	1.44E+1	7.81E-2	-8.99E+1	1.09E+2
WDP	m3 depriv.	1.10E+1	8.08E-3	1.96E+0	1.30E+1	4.40E-3	5.64E-1	4.33E-4	-5.29E+0	8.24E+0
PM	disease inc.	2.59E-7	1.35E-8	2.12E-8	2.93E-7	8.44E-9	6.56E-8	5.36E-10	-9.42E-8	2.74E-7
IR	kBq U-235 eq	3.55E-1	9.47E-3	5.22E-3	3.69E-1	6.27E-3	5.04E-2	3.59E-4	-1.72E-1	2.55E-1
ETP-fw	CTUe	1.12E+2	2.02E+0	4.83E+0	1.19E+2	1.17E+0	1.09E+2	1.20E+0	-5.42E+1	1.76E+2
HTP-c	CTUh	4.58E-9	6.54E-11	1.65E-10	4.81E-9	4.15E-11	1.60E-9	2.05E-12	-1.98E-9	4.47E-9
HTP-nc	CTUh	1.43E-7	2.20E-9	5.04E-9	1.50E-7	1.39E-9	3.82E-8	2.30E-10	-6.83E-8	1.22E-7
SQP	Pt	9.11E+1	1.96E+0	2.16E-1	9.33E+1	1.23E+0	8.93E+0	1.99E-1	-2.45E+1	7.91E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.86E+1	2.83E-2	8.73E+0	2.74E+1	2.06E-2	1.03E+0	2.86E-3	-6.88E+0	2.16E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.86E+1	2.83E-2	8.73E+0	2.74E+1	2.06E-2	1.03E+0	2.86E-3	-6.88E+0	2.16E+1
PENRE	MJ	1.91E+2	2.40E+0	3.14E+0	1.97E+2	1.52E+0	1.53E+1	8.28E-2	-9.69E+1	1.17E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.91E+2	2.40E+0	3.14E+0	1.97E+2	1.52E+0	1.53E+1	8.28E-2	-9.69E+1	1.17E+2
PET	MJ	2.10E+2	2.43E+0	1.19E+1	2.24E+2	1.54E+0	1.63E+1	8.57E-2	-1.04E+2	1.38E+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	1.20E-1	2.75E-4	4.61E-2	1.66E-1	1.62E-4	1.55E-2	9.58E-5	-5.54E-2	1.26E-1
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.34E-4	5.73E-6	4.05E-6	1.44E-4	3.67E-6	2.32E-5	9.41E-8	-7.49E-5	9.59E-5
NHWD	kg	6.54E-1	1.43E-1	5.85E-3	8.03E-1	8.89E-2	5.40E-1	3.55E-1	-2.87E-1	1.50E+0
RWD	kg	3.12E-4	1.48E-5	7.28E-6	3.34E-4	9.76E-6	5.40E-5	5.10E-7	-1.52E-4	2.47E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777