

Environmental Profile

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

Ecochain v3.5.80



Product: 3030829 - PVC RWA Pipe GY KOMO 100x1.8 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	1.06	0.03	0.05	1.14	0.02	0.38	0	-0.53	1.01
ADPE	kg Sb-eq	2.69E-4	6.75E-6	8.81E-6	2.85E-4	3.75E-6	3.14E-5	3.88E-8	-1.11E-4	2.09E-4
ADPF	kg Sb-eq	1.17E-1	1.94E-3	2.36E-3	1.22E-1	1.05E-3	1.11E-2	5.50E-5	-6.24E-2	7.16E-2
GWP	kg CO2-eq	9.52E+0	2.64E-1	4.20E-1	1.02E+1	1.44E-1	3.64E+0	3.44E-2	-5.26E+0	8.76E+0
ODP	kg CFC-11-eq	5.57E-6	4.69E-8	3.94E-8	5.66E-6	2.66E-8	4.44E-7	1.32E-9	-2.75E-6	3.38E-6
POCP	kg ethene-eq	5.88E-3	1.59E-4	1.85E-4	6.22E-3	8.62E-5	8.75E-4	9.19E-6	-2.71E-3	4.48E-3
AP	kg SO2-eq	3.69E-2	1.16E-3	1.65E-3	3.97E-2	6.18E-4	6.37E-3	2.93E-5	-1.74E-2	2.93E-2
EP	kg PO4 3--eq	4.47E-3	2.28E-4	2.60E-4	4.96E-3	1.23E-4	9.69E-4	1.12E-5	-2.15E-3	3.91E-3
HTP	kg 1,4-DB-eq	3.73E+0	1.11E-1	1.58E-1	4.00E+0	6.14E-2	1.71E+0	3.00E-3	-1.69E+0	4.08E+0
FAETP	kg 1,4-DB-eq	8.13E-2	3.25E-3	6.45E-3	9.10E-2	1.80E-3	2.50E-2	8.79E-4	-3.69E-2	8.18E-2
MAETP	kg 1,4-DB-eq	2.36E+2	1.17E+1	2.63E+1	2.74E+2	6.43E+0	8.27E+1	1.08E+0	-1.08E+2	2.56E+2
TETP	kg 1,4-DB-eq	2.60E-2	3.93E-4	9.84E-3	3.63E-2	2.18E-4	6.08E-3	9.92E-6	-1.23E-2	3.03E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.53E+0	2.67E-1	4.95E-1	9.29E+0	1.45E-1	4.98E+0	4.01E-2	-5.42E+0	9.04E+0
GWP-f	kg CO2 eq	9.76E+0	2.67E-1	3.87E-1	1.04E+1	1.45E-1	3.67E+0	4.01E-2	-5.38E+0	8.89E+0
GWP-b	kg CO2 eq	-1.24E+0	1.23E-4	8.37E-2	-1.16E+0	8.79E-5	1.32E+0	5.18E-5	-3.78E-2	1.20E-1
GWP-luluc	kg CO2 eq	8.19E-3	9.77E-5	2.36E-2	3.19E-2	5.12E-5	1.71E-3	1.09E-6	-3.70E-3	2.99E-2
ODP	kg CFC11 eq	5.50E-6	5.88E-8	4.68E-8	5.60E-6	3.34E-8	4.58E-7	1.64E-9	-2.72E-6	3.37E-6
AP	mol H+ eq	4.45E-2	1.55E-3	2.11E-3	4.82E-2	8.25E-4	8.00E-3	3.92E-5	-2.11E-2	3.60E-2
EP-fw	kg P eq	4.33E-4	2.69E-6	5.54E-6	4.42E-4	1.19E-6	5.67E-5	4.92E-8	-2.02E-4	2.98E-4
EP-m	kg N eq	7.61E-3	5.45E-4	6.22E-4	8.78E-3	2.95E-4	1.96E-3	2.38E-5	-3.71E-3	7.34E-3
EP-T	mol N eq	8.28E-2	6.01E-3	6.67E-3	9.54E-2	3.25E-3	2.16E-2	1.57E-4	-4.04E-2	8.01E-2
POCP	kg NMVOC eq	2.83E-2	1.71E-3	1.88E-3	3.19E-2	9.30E-4	6.49E-3	5.33E-5	-1.36E-2	2.58E-2
ADP-mm	kg Sb eq	2.69E-4	6.75E-6	8.81E-6	2.85E-4	3.75E-6	3.14E-5	3.88E-8	-1.11E-4	2.09E-4
ADP-f	MJ	2.50E+2	4.02E+0	4.48E+0	2.59E+2	2.22E+0	2.19E+1	1.19E-1	-1.31E+2	1.52E+2
WDP	m3 depriv.	1.64E+1	1.44E-2	3.03E+0	1.95E+1	6.82E-3	8.46E-1	6.57E-4	-7.81E+0	1.25E+1
PM	disease inc.	3.51E-7	2.39E-8	3.28E-8	4.08E-7	1.31E-8	1.00E-7	8.14E-10	-1.40E-7	3.82E-7
IR	kBq U-235 eq	5.36E-1	1.68E-2	8.09E-3	5.61E-1	9.72E-3	7.64E-2	5.45E-4	-2.53E-1	3.94E-1
ETP-fw	CTUe	1.68E+2	3.58E+0	7.48E+0	1.79E+2	1.80E+0	1.62E+2	1.78E+0	-8.11E+1	2.63E+2
HTP-c	CTUh	6.90E-9	1.16E-10	2.55E-10	7.27E-9	6.42E-11	2.43E-9	3.07E-12	-2.94E-9	6.83E-9
HTP-nc	CTUh	2.14E-7	3.92E-9	7.80E-9	2.26E-7	2.15E-9	5.74E-8	3.42E-10	-1.01E-7	1.85E-7
SQP	Pt	1.50E+2	3.49E+0	3.35E-1	1.54E+2	1.90E+0	1.37E+1	3.01E-1	-3.95E+1	1.31E+2

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.99E+1	5.03E-2	1.35E+1	4.35E+1	3.19E-2	1.56E+0	4.27E-3	-1.08E+1	3.42E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.99E+1	5.03E-2	1.35E+1	4.35E+1	3.19E-2	1.56E+0	4.27E-3	-1.08E+1	3.42E+1
PENRE	MJ	2.68E+2	4.27E+0	4.86E+0	2.77E+2	2.36E+0	2.33E+1	1.26E-1	-1.41E+2	1.62E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.68E+2	4.27E+0	4.86E+0	2.77E+2	2.36E+0	2.33E+1	1.26E-1	-1.41E+2	1.62E+2
PET	MJ	2.98E+2	4.32E+0	1.84E+1	3.21E+2	2.39E+0	2.49E+1	1.30E-1	-1.52E+2	1.96E+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	1.76E-1	4.90E-4	7.14E-2	2.47E-1	2.52E-4	2.32E-2	1.46E-4	-8.18E-2	1.89E-1
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.04E-4	1.02E-5	6.28E-6	2.21E-4	5.68E-6	3.53E-5	1.43E-7	-1.09E-4	1.53E-4
NHWD	kg	9.79E-1	2.55E-1	9.06E-3	1.24E+0	1.38E-1	8.26E-1	5.51E-1	-4.26E-1	2.33E+0
RWD	kg	4.72E-4	2.64E-5	1.13E-5	5.10E-4	1.51E-5	8.23E-5	7.77E-7	-2.24E-4	3.84E-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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