

Environmental Profile

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

Ecochain v3.5.80



Product: 3004159 - PVC RWA Reducer Sewer GY 70x50
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	0.01	0	0	0.01	0	0	0	-0	0.01
ADPE	kg Sb-eq	8.29E-5	2.92E-8	1.31E-7	8.31E-5	2.72E-8	2.48E-7	3.04E-10	-9.50E-7	8.24E-5
ADPF	kg Sb-eq	9.75E-4	8.42E-6	2.25E-5	1.01E-3	7.67E-6	8.55E-5	4.21E-7	-5.35E-4	5.65E-4
GWP	kg CO2-eq	8.18E-2	1.14E-3	4.26E-3	8.73E-2	1.04E-3	2.93E-2	2.87E-4	-4.60E-2	7.19E-2
ODP	kg CFC-11-eq	4.60E-8	2.03E-10	3.37E-10	4.65E-8	1.94E-10	3.59E-9	1.00E-11	-2.32E-8	2.71E-8
POCP	kg ethene-eq	4.69E-5	6.91E-7	1.85E-6	4.94E-5	6.27E-7	6.77E-6	7.44E-8	-2.39E-5	3.30E-5
AP	kg SO2-eq	3.28E-4	5.03E-6	1.83E-5	3.51E-4	4.49E-6	5.00E-5	2.27E-7	-1.58E-4	2.49E-4
EP	kg PO4 3--eq	4.24E-5	9.89E-7	2.36E-6	4.57E-5	8.98E-7	7.58E-6	8.94E-8	-2.15E-5	3.28E-5
HTP	kg 1,4-DB-eq	3.20E-2	4.82E-4	1.98E-3	3.44E-2	4.47E-4	1.30E-2	2.38E-5	-1.50E-2	3.29E-2
FAETP	kg 1,4-DB-eq	9.76E-4	1.41E-5	6.77E-5	1.06E-3	1.31E-5	1.99E-4	7.33E-6	-4.28E-4	8.49E-4
MAETP	kg 1,4-DB-eq	2.26E+0	5.06E-2	2.67E-1	2.58E+0	4.67E-2	6.85E-1	8.97E-3	-9.71E-1	2.35E+0
TETP	kg 1,4-DB-eq	2.37E-4	1.70E-6	1.47E-4	3.86E-4	1.58E-6	4.63E-5	8.01E-8	-1.43E-4	2.91E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.46E-2	1.16E-3	4.88E-3	9.07E-2	1.05E-3	3.14E-2	3.34E-4	-4.29E-2	8.05E-2
GWP-f	kg CO2 eq	8.37E-2	1.15E-3	3.75E-3	8.86E-2	1.05E-3	2.95E-2	3.34E-4	-4.70E-2	7.25E-2
GWP-b	kg CO2 eq	8.32E-4	5.33E-7	7.74E-4	1.61E-3	6.39E-7	1.90E-3	4.22E-7	4.10E-3	7.60E-3
GWP-luluc	kg CO2 eq	9.58E-5	4.23E-7	3.56E-4	4.52E-4	3.73E-7	1.33E-5	8.77E-9	-5.98E-5	4.06E-4
ODP	kg CFC11 eq	4.53E-8	2.55E-10	3.96E-10	4.60E-8	2.43E-10	3.70E-9	1.25E-11	-2.30E-8	2.70E-8
AP	mol H+ eq	4.00E-4	6.69E-6	2.29E-5	4.29E-4	6.00E-6	6.27E-5	3.03E-7	-1.91E-4	3.07E-4
EP-fw	kg P eq	4.06E-6	1.16E-8	6.57E-8	4.14E-6	8.66E-9	4.46E-7	3.97E-10	-2.04E-6	2.55E-6
EP-m	kg N eq	7.19E-5	2.36E-6	5.40E-6	7.96E-5	2.15E-6	1.53E-5	1.88E-7	-3.41E-5	6.32E-5
EP-T	mol N eq	7.74E-4	2.60E-5	5.96E-5	8.59E-4	2.36E-5	1.69E-4	1.21E-6	-3.67E-4	6.86E-4
POCP	kg NMVOC eq	2.47E-4	7.42E-6	1.69E-5	2.72E-4	6.76E-6	5.06E-5	4.16E-7	-1.22E-4	2.07E-4
ADP-mm	kg Sb eq	8.29E-5	2.92E-8	1.31E-7	8.31E-5	2.72E-8	2.48E-7	3.04E-10	-9.50E-7	8.24E-5
ADP-f	MJ	2.08E+0	1.74E-2	4.19E-2	2.14E+0	1.62E-2	1.69E-1	9.11E-4	-1.13E+0	1.20E+0
WDP	m3 depriv.	1.37E-1	6.23E-5	3.24E-2	1.70E-1	4.96E-5	6.70E-3	5.90E-6	-7.12E-2	1.06E-1
PM	disease inc.	2.71E-9	1.04E-10	2.82E-10	3.10E-9	9.50E-11	7.75E-10	6.27E-12	-1.49E-9	2.48E-9
IR	kBq U-235 eq	4.76E-3	7.29E-5	6.66E-5	4.90E-3	7.06E-5	5.99E-4	4.19E-6	-2.36E-3	3.21E-3
ETP-fw	CTUe	2.59E+0	1.55E-2	9.74E-2	2.70E+0	1.31E-2	1.32E+0	1.45E-2	-9.57E-1	3.09E+0
HTP-c	CTUh	6.93E-11	5.03E-13	3.37E-12	7.31E-11	4.67E-13	1.88E-11	2.52E-14	-2.63E-11	6.61E-11
HTP-nc	CTUh	2.29E-9	1.70E-11	1.05E-10	2.41E-9	1.56E-11	4.56E-10	2.79E-12	-9.11E-10	1.97E-9
SQP	Pt	4.47E-1	1.51E-2	3.13E-3	4.66E-1	1.38E-2	1.03E-1	2.33E-3	-9.06E-1	-3.21E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.40E-1	2.18E-4	2.04E-1	3.44E-1	2.32E-4	1.22E-2	3.40E-5	-1.90E-1	1.66E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.40E-1	2.18E-4	2.04E-1	3.44E-1	2.32E-4	1.22E-2	3.40E-5	-1.90E-1	1.66E-1
PENRE	MJ	2.23E+0	1.85E-2	4.53E-2	2.29E+0	1.72E-2	1.80E-1	9.67E-4	-1.21E+0	1.28E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.23E+0	1.85E-2	4.53E-2	2.29E+0	1.72E-2	1.80E-1	9.67E-4	-1.21E+0	1.28E+0
PET	MJ	2.37E+0	1.87E-2	2.49E-1	2.64E+0	1.74E-2	1.92E-1	1.00E-3	-1.40E+0	1.44E+0
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	1.55E-3	2.12E-6	7.67E-4	2.31E-3	1.83E-6	1.84E-4	1.12E-6	-8.42E-4	1.66E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.19E-5	4.41E-8	4.45E-8	1.20E-5	4.13E-8	2.77E-7	1.11E-9	-9.57E-7	1.14E-5
NHWD	kg	8.75E-3	1.10E-3	6.87E-5	9.92E-3	1.00E-3	6.10E-3	4.00E-3	-3.80E-3	1.72E-2
RWD	kg	4.14E-6	1.14E-7	8.25E-8	4.33E-6	1.10E-7	6.42E-7	5.92E-9	-2.10E-6	2.99E-6
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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