

Environmental Profile

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

Ecochain v3.5.80



Product: 3004166 - PVC RWA Reducer Sewer GY 110x100
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]

Statement of Confidentiality

This document and supporting material contain confidential and proprietary business information of Wavin - NL - Hardenberg - Verified. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - NL - Hardenberg - Verified.

Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.03	0	0	0.03	0	0.01	0	-0.01	0.02
ADPE	kg Sb-eq	2.36E-4	8.23E-8	4.24E-7	2.37E-4	7.76E-8	7.03E-7	8.67E-10	-2.70E-6	2.35E-4
ADPF	kg Sb-eq	2.76E-3	2.37E-5	7.29E-5	2.86E-3	2.19E-5	2.43E-4	1.20E-6	-1.51E-3	1.61E-3
GWP	kg CO2-eq	2.31E-1	3.22E-3	1.38E-2	2.48E-1	2.98E-3	8.30E-2	8.17E-4	-1.30E-1	2.05E-1
ODP	kg CFC-11-eq	1.31E-7	5.72E-10	1.09E-9	1.32E-7	5.52E-10	1.02E-8	2.86E-11	-6.59E-8	7.73E-8
POCP	kg ethene-eq	1.33E-4	1.94E-6	6.01E-6	1.41E-4	1.79E-6	1.92E-5	2.12E-7	-6.73E-5	9.44E-5
AP	kg SO2-eq	9.28E-4	1.42E-5	5.95E-5	1.00E-3	1.28E-5	1.42E-4	6.46E-7	-4.42E-4	7.15E-4
EP	kg PO4 3--eq	1.19E-4	2.78E-6	7.64E-6	1.29E-4	2.56E-6	2.15E-5	2.55E-7	-5.91E-5	9.42E-5
HTP	kg 1,4-DB-eq	9.06E-2	1.36E-3	6.43E-3	9.83E-2	1.27E-3	3.69E-2	6.79E-5	-4.22E-2	9.44E-2
FAETP	kg 1,4-DB-eq	2.71E-3	3.96E-5	2.19E-4	2.97E-3	3.73E-5	5.61E-4	2.09E-5	-1.16E-3	2.43E-3
MAETP	kg 1,4-DB-eq	6.39E+0	1.42E-1	8.65E-1	7.40E+0	1.33E-1	1.93E+0	2.56E-2	-2.73E+0	6.76E+0
TETP	kg 1,4-DB-eq	6.70E-4	4.79E-6	4.78E-4	1.15E-3	4.51E-6	1.32E-4	2.28E-7	-3.88E-4	9.00E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.39E-1	3.25E-3	1.58E-2	2.58E-1	3.00E-3	8.82E-2	9.53E-4	-1.23E-1	2.27E-1
GWP-f	kg CO2 eq	2.37E-1	3.25E-3	1.22E-2	2.52E-1	3.00E-3	8.36E-2	9.52E-4	-1.33E-1	2.07E-1
GWP-b	kg CO2 eq	2.35E-3	1.50E-6	2.51E-3	4.87E-3	1.82E-6	4.55E-3	1.20E-6	9.71E-3	1.91E-2
GWP-luluc	kg CO2 eq	2.62E-4	1.19E-6	1.15E-3	1.42E-3	1.06E-6	3.79E-5	2.50E-8	-1.57E-4	1.30E-3
ODP	kg CFC11 eq	1.29E-7	7.17E-10	1.29E-9	1.31E-7	6.92E-10	1.05E-8	3.55E-11	-6.53E-8	7.70E-8
AP	mol H+ eq	1.13E-3	1.88E-5	7.42E-5	1.22E-3	1.71E-5	1.78E-4	8.65E-7	-5.34E-4	8.83E-4
EP-fw	kg P eq	1.14E-5	3.28E-8	2.13E-7	1.17E-5	2.47E-8	1.27E-6	1.13E-9	-5.65E-6	7.33E-6
EP-m	kg N eq	2.01E-4	6.64E-6	1.75E-5	2.26E-4	6.12E-6	4.33E-5	5.36E-7	-9.51E-5	1.80E-4
EP-T	mol N eq	2.17E-3	7.32E-5	1.93E-4	2.44E-3	6.74E-5	4.78E-4	3.45E-6	-1.02E-3	1.97E-3
POCP	kg NMVOC eq	6.97E-4	2.09E-5	5.50E-5	7.73E-4	1.93E-5	1.43E-4	1.19E-6	-3.42E-4	5.94E-4
ADP-mm	kg Sb eq	2.36E-4	8.23E-8	4.24E-7	2.37E-4	7.76E-8	7.03E-7	8.67E-10	-2.69E-6	2.35E-4
ADP-f	MJ	5.89E+0	4.90E-2	1.36E-1	6.07E+0	4.61E-2	4.80E-1	2.60E-3	-3.19E+0	3.41E+0
WDP	m3 depriv.	3.91E-1	1.75E-4	1.05E-1	4.96E-1	1.41E-4	1.91E-2	1.68E-5	-2.00E-1	3.15E-1
PM	disease inc.	7.58E-9	2.92E-10	9.16E-10	8.79E-9	2.71E-10	2.19E-9	1.79E-11	-4.06E-9	7.21E-9
IR	kBq U-235 eq	1.35E-2	2.05E-4	2.16E-4	1.39E-2	2.01E-4	1.70E-3	1.19E-5	-6.61E-3	9.19E-3
ETP-fw	CTUe	7.14E+0	4.37E-2	3.16E-1	7.50E+0	3.74E-2	3.75E+0	4.15E-2	-2.58E+0	8.75E+0
HTP-c	CTUh	1.97E-10	1.42E-12	1.09E-11	2.09E-10	1.33E-12	5.33E-11	7.17E-14	-7.39E-11	1.90E-10
HTP-nc	CTUh	6.50E-9	4.78E-11	3.41E-10	6.89E-9	4.46E-11	1.30E-9	7.94E-12	-2.56E-9	5.68E-9
SQP	Pt	1.20E+0	4.25E-2	1.02E-2	1.25E+0	3.94E-2	2.93E-1	6.65E-3	-2.23E+0	-6.39E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.83E-1	6.13E-4	6.61E-1	1.04E+0	6.61E-4	3.48E-2	9.69E-5	-4.79E-1	6.01E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.83E-1	6.13E-4	6.61E-1	1.04E+0	6.61E-4	3.48E-2	9.69E-5	-4.79E-1	6.01E-1
PENRE	MJ	6.31E+0	5.20E-2	1.47E-1	6.51E+0	4.89E-2	5.11E-1	2.75E-3	-3.44E+0	3.64E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.31E+0	5.20E-2	1.47E-1	6.51E+0	4.89E-2	5.11E-1	2.75E-3	-3.44E+0	3.64E+0
PET	MJ	6.70E+0	5.26E-2	8.08E-1	7.56E+0	4.96E-2	5.46E-1	2.85E-3	-3.91E+0	4.24E+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	4.37E-3	5.97E-6	2.49E-3	6.87E-3	5.21E-6	5.22E-4	3.18E-6	-2.33E-3	5.07E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.40E-5	1.24E-7	1.44E-7	3.42E-5	1.18E-7	7.84E-7	3.16E-9	-2.70E-6	3.24E-5
NHWD	kg	2.47E-2	3.11E-3	2.23E-4	2.80E-2	2.85E-3	1.73E-2	1.14E-2	-1.07E-2	4.89E-2
RWD	kg	1.17E-5	3.22E-7	2.68E-7	1.23E-5	3.13E-7	1.82E-6	1.69E-8	-5.87E-6	8.56E-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



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