

Environmental Profile

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

Ecochain v3.5.80



Product: 3001297 - Wafix PVC Bend 30° GY 110 SN8 S/S
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	0.08	0	0	0.08	0	0.02	0	-0.04	0.07
ADPE	kg Sb-eq	5.99E-4	2.59E-7	1.05E-6	6.00E-4	2.30E-7	1.93E-6	2.56E-9	-7.43E-6	5.95E-4
ADPF	kg Sb-eq	8.87E-3	7.45E-5	1.80E-4	9.12E-3	6.48E-5	6.72E-4	3.56E-6	-4.74E-3	5.13E-3
GWP	kg CO2-eq	6.96E-1	1.01E-2	3.42E-2	7.40E-1	8.83E-3	2.51E-1	2.61E-3	-3.91E-1	6.12E-1
ODP	kg CFC-11-eq	3.33E-7	1.80E-9	2.70E-9	3.37E-7	1.64E-9	2.60E-8	8.49E-11	-1.75E-7	1.90E-7
POCP	kg ethene-eq	4.54E-4	6.11E-6	1.48E-5	4.75E-4	5.30E-6	5.46E-5	6.59E-7	-2.10E-4	3.25E-4
AP	kg SO2-eq	2.76E-3	4.45E-5	1.47E-4	2.95E-3	3.80E-5	3.87E-4	1.91E-6	-1.30E-3	2.08E-3
EP	kg PO4 3--eq	3.47E-4	8.75E-6	1.89E-5	3.75E-4	7.59E-6	5.98E-5	8.54E-7	-1.73E-4	2.70E-4
HTP	kg 1,4-DB-eq	2.57E-1	4.26E-3	1.59E-2	2.77E-1	3.78E-3	1.06E-1	2.10E-4	-1.18E-1	2.68E-1
FAETP	kg 1,4-DB-eq	7.67E-3	1.24E-4	5.42E-4	8.34E-3	1.11E-4	1.66E-3	9.03E-5	-3.36E-3	6.84E-3
MAETP	kg 1,4-DB-eq	1.82E+1	4.48E-1	2.14E+0	2.08E+1	3.95E-1	5.42E+0	1.02E-1	-7.63E+0	1.91E+1
TETP	kg 1,4-DB-eq	1.79E-3	1.51E-5	1.18E-3	2.98E-3	1.34E-5	3.70E-4	6.53E-7	-1.11E-3	2.26E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.19E-1	1.02E-2	3.91E-2	7.68E-1	8.90E-3	2.68E-1	3.05E-3	-3.68E-1	6.80E-1
GWP-f	kg CO2 eq	7.13E-1	1.02E-2	3.00E-2	7.53E-1	8.90E-3	2.53E-1	3.05E-3	-4.00E-1	6.18E-1
GWP-b	kg CO2 eq	5.38E-3	4.71E-6	6.20E-3	1.16E-2	5.40E-6	1.50E-2	3.60E-6	3.24E-2	5.90E-2
GWP-luluc	kg CO2 eq	7.48E-4	3.74E-6	2.85E-3	3.60E-3	3.15E-6	1.02E-4	7.38E-8	-4.70E-4	3.24E-3
ODP	kg CFC11 eq	3.30E-7	2.25E-9	3.17E-9	3.36E-7	2.05E-9	2.69E-8	1.05E-10	-1.73E-7	1.91E-7
AP	mol H+ eq	3.36E-3	5.92E-5	1.83E-4	3.60E-3	5.07E-5	4.87E-4	2.56E-6	-1.57E-3	2.57E-3
EP-fw	kg P eq	3.15E-5	1.03E-7	5.26E-7	3.22E-5	7.32E-8	3.36E-6	3.35E-9	-1.59E-5	1.97E-5
EP-m	kg N eq	5.92E-4	2.09E-5	4.33E-5	6.57E-4	1.81E-5	1.21E-4	1.80E-6	-2.81E-4	5.17E-4
EP-T	mol N eq	6.42E-3	2.30E-4	4.77E-4	7.13E-3	2.00E-4	1.34E-3	1.02E-5	-3.03E-3	5.65E-3
POCP	kg NMVOC eq	2.20E-3	6.57E-5	1.36E-4	2.40E-3	5.71E-5	4.03E-4	3.57E-6	-1.04E-3	1.83E-3
ADP-mm	kg Sb eq	5.99E-4	2.59E-7	1.05E-6	6.00E-4	2.30E-7	1.93E-6	2.56E-9	-7.43E-6	5.95E-4
ADP-f	MJ	1.89E+1	1.54E-1	3.36E-1	1.94E+1	1.37E-1	1.33E+0	7.70E-3	-9.95E+0	1.09E+1
WDP	m3 depriv.	1.05E+0	5.51E-4	2.60E-1	1.31E+0	4.19E-4	4.98E-2	4.75E-5	-5.61E-1	7.97E-1
PM	disease inc.	2.49E-8	9.17E-10	2.26E-9	2.81E-8	8.03E-10	6.21E-9	5.30E-11	-1.25E-8	2.27E-8
IR	kBq U-235 eq	4.02E-2	6.45E-4	5.34E-4	4.14E-2	5.97E-4	4.65E-3	3.55E-5	-1.85E-2	2.82E-2
ETP-fw	CTUe	1.99E+1	1.37E-1	7.80E-1	2.09E+1	1.11E-1	9.36E+0	1.03E-1	-7.49E+0	2.29E+1
HTP-c	CTUh	5.28E-10	4.45E-12	2.70E-11	5.60E-10	3.95E-12	1.51E-10	2.09E-13	-2.06E-10	5.08E-10
HTP-nc	CTUh	1.71E-8	1.50E-10	8.43E-10	1.81E-8	1.32E-10	3.43E-9	2.03E-11	-7.07E-9	1.46E-8
SQP	Pt	3.69E+0	1.34E-1	2.51E-2	3.85E+0	1.17E-1	8.42E-1	1.97E-2	-7.16E+0	-2.34E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.12E+0	1.93E-3	1.63E+0	2.76E+0	1.96E-3	9.28E-2	2.93E-4	-1.51E+0	1.34E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.12E+0	1.93E-3	1.63E+0	2.76E+0	1.96E-3	9.28E-2	2.93E-4	-1.51E+0	1.34E+0
PENRE	MJ	2.02E+1	1.64E-1	3.63E-1	2.08E+1	1.45E-1	1.42E+0	8.17E-3	-1.07E+1	1.16E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.02E+1	1.64E-1	3.63E-1	2.08E+1	1.45E-1	1.42E+0	8.17E-3	-1.07E+1	1.16E+1
PET	MJ	2.14E+1	1.65E-1	2.00E+0	2.35E+1	1.47E-1	1.51E+0	8.46E-3	-1.22E+1	1.30E+1
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	1.26E-2	1.88E-5	6.14E-3	1.87E-2	1.55E-5	1.38E-3	9.45E-6	-6.75E-3	1.34E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.42E-5	3.90E-7	3.57E-7	8.49E-5	3.49E-7	2.19E-6	9.35E-9	-7.53E-6	7.99E-5
NHWD	kg	6.81E-2	9.77E-3	5.51E-4	7.84E-2	8.46E-3	5.03E-2	3.38E-2	-2.97E-2	1.41E-1
RWD	kg	3.73E-5	1.01E-6	6.61E-7	3.90E-5	9.29E-7	5.08E-6	5.01E-8	-1.64E-5	2.86E-5
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