

Environmental Profile

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

Ecochain v3.5.80



Product: 3024554 - WfxPVC Bend 15° 125 GY/GD 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	0.1	0	0.01	0.11	0	0.03	0	-0.05	0.09
ADPE	kg Sb-eq	7.63E-4	3.30E-7	1.35E-6	7.64E-4	2.97E-7	2.45E-6	3.31E-9	-9.47E-6	7.58E-4
ADPF	kg Sb-eq	1.15E-2	9.51E-5	2.32E-4	1.18E-2	8.36E-5	8.57E-4	4.59E-6	-6.09E-3	6.63E-3
GWP	kg CO2-eq	8.90E-1	1.29E-2	4.40E-2	9.47E-1	1.14E-2	3.24E-1	3.39E-3	-4.99E-1	7.86E-1
ODP	kg CFC-11-eq	4.23E-7	2.29E-9	3.48E-9	4.28E-7	2.11E-9	3.29E-8	1.10E-10	-2.24E-7	2.40E-7
POCP	kg ethene-eq	5.90E-4	7.80E-6	1.91E-5	6.17E-4	6.83E-6	6.94E-5	8.53E-7	-2.68E-4	4.26E-4
AP	kg SO2-eq	3.54E-3	5.68E-5	1.89E-4	3.78E-3	4.90E-5	4.91E-4	2.47E-6	-1.63E-3	2.69E-3
EP	kg PO4 3--eq	4.38E-4	1.12E-5	2.43E-5	4.73E-4	9.78E-6	7.59E-5	1.12E-6	-2.12E-4	3.49E-4
HTP	kg 1,4-DB-eq	3.28E-1	5.44E-3	2.04E-2	3.54E-1	4.87E-3	1.35E-1	2.72E-4	-1.49E-1	3.45E-1
FAETP	kg 1,4-DB-eq	9.50E-3	1.59E-4	6.98E-4	1.04E-2	1.43E-4	2.12E-3	1.19E-4	-4.03E-3	8.71E-3
MAETP	kg 1,4-DB-eq	2.32E+1	5.72E-1	2.75E+0	2.66E+1	5.10E-1	6.85E+0	1.34E-1	-9.61E+0	2.44E+1
TETP	kg 1,4-DB-eq	2.24E-3	1.92E-5	1.52E-3	3.78E-3	1.73E-5	4.73E-4	8.41E-7	-1.33E-3	2.95E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.20E-1	1.30E-2	5.04E-2	9.83E-1	1.15E-2	3.41E-1	3.95E-3	-4.80E-1	8.59E-1
GWP-f	kg CO2 eq	9.12E-1	1.30E-2	3.87E-2	9.64E-1	1.15E-2	3.26E-1	3.95E-3	-5.11E-1	7.94E-1
GWP-b	kg CO2 eq	6.54E-3	6.02E-6	7.99E-3	1.45E-2	6.97E-6	1.49E-2	4.65E-6	3.17E-2	6.12E-2
GWP-luluc	kg CO2 eq	9.05E-4	4.78E-6	3.67E-3	4.58E-3	4.06E-6	1.30E-4	9.52E-8	-5.35E-4	4.18E-3
ODP	kg CFC11 eq	4.20E-7	2.88E-9	4.09E-9	4.27E-7	2.64E-9	3.41E-8	1.36E-10	-2.22E-7	2.43E-7
AP	mol H+ eq	4.29E-3	7.56E-5	2.36E-4	4.60E-3	6.54E-5	6.18E-4	3.30E-6	-1.97E-3	3.31E-3
EP-fw	kg P eq	3.99E-5	1.32E-7	6.78E-7	4.07E-5	9.44E-8	4.28E-6	4.32E-9	-1.96E-5	2.55E-5
EP-m	kg N eq	7.47E-4	2.66E-5	5.57E-5	8.29E-4	2.34E-5	1.54E-4	2.36E-6	-3.51E-4	6.58E-4
EP-T	mol N eq	8.13E-3	2.94E-4	6.15E-4	9.04E-3	2.58E-4	1.70E-3	1.32E-5	-3.78E-3	7.23E-3
POCP	kg NMVOC eq	2.83E-3	8.39E-5	1.75E-4	3.08E-3	7.37E-5	5.11E-4	4.61E-6	-1.31E-3	2.36E-3
ADP-mm	kg Sb eq	7.63E-4	3.30E-7	1.35E-6	7.64E-4	2.97E-7	2.45E-6	3.31E-9	-9.47E-6	7.58E-4
ADP-f	MJ	2.44E+1	1.97E-1	4.33E-1	2.50E+1	1.76E-1	1.70E+0	9.93E-3	-1.28E+1	1.41E+1
WDP	m3 depriv.	1.34E+0	7.03E-4	3.35E-1	1.67E+0	5.41E-4	6.34E-2	6.10E-5	-7.07E-1	1.03E+0
PM	disease inc.	3.18E-8	1.17E-9	2.91E-9	3.59E-8	1.04E-9	7.91E-9	6.83E-11	-1.51E-8	2.98E-8
IR	kBq U-235 eq	5.18E-2	8.24E-4	6.88E-4	5.33E-2	7.70E-4	5.91E-3	4.59E-5	-2.31E-2	3.69E-2
ETP-fw	CTUe	2.43E+1	1.75E-1	1.00E+0	2.55E+1	1.43E-1	1.19E+1	1.30E-1	-8.86E+0	2.88E+1
HTP-c	CTUh	6.72E-10	5.69E-12	3.48E-11	7.12E-10	5.09E-12	1.92E-10	2.69E-13	-2.59E-10	6.51E-10
HTP-nc	CTUh	2.17E-8	1.92E-10	1.09E-9	2.30E-8	1.71E-10	4.36E-9	2.58E-11	-8.88E-9	1.87E-8
SQP	Pt	4.37E+0	1.71E-1	3.23E-2	4.58E+0	1.51E-1	1.08E+0	2.54E-2	-7.42E+0	-1.59E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.36E+0	2.46E-3	2.10E+0	3.47E+0	2.53E-3	1.18E-1	3.79E-4	-1.61E+0	1.98E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.36E+0	2.46E-3	2.10E+0	3.47E+0	2.53E-3	1.18E-1	3.79E-4	-1.61E+0	1.98E+0
PENRE	MJ	2.61E+1	2.09E-1	4.68E-1	2.68E+1	1.87E-1	1.81E+0	1.05E-2	-1.38E+1	1.50E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.61E+1	2.09E-1	4.68E-1	2.68E+1	1.87E-1	1.81E+0	1.05E-2	-1.38E+1	1.50E+1
PET	MJ	2.75E+1	2.11E-1	2.57E+0	3.03E+1	1.90E-1	1.93E+0	1.09E-2	-1.54E+1	1.70E+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	1.61E-2	2.39E-5	7.92E-3	2.40E-2	1.99E-5	1.76E-3	1.22E-5	-8.31E-3	1.75E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.07E-4	4.98E-7	4.59E-7	1.08E-4	4.51E-7	2.79E-6	1.21E-8	-9.55E-6	1.01E-4
NHWD	kg	8.58E-2	1.25E-2	7.09E-4	9.90E-2	1.09E-2	6.44E-2	4.36E-2	-3.74E-2	1.81E-1
RWD	kg	4.84E-5	1.29E-6	8.52E-7	5.05E-5	1.20E-6	6.46E-6	6.47E-8	-2.05E-5	3.77E-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