

Environmental Profile

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

Ecochain v3.5.80



Product: 3000565 - PVC Pipe BR BENOR 250x6.2 SN4 L=5 SC/CH
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

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	7.37	0.19	0.33	7.89	0.12	2.67	0.02	-3.69	7.01
ADPE	kg Sb-eq	2.02E-3	4.07E-5	6.00E-5	2.12E-3	2.56E-5	2.15E-4	2.69E-7	-7.75E-4	1.59E-3
ADPF	kg Sb-eq	8.24E-1	1.17E-2	1.61E-2	8.52E-1	7.22E-3	7.56E-2	3.80E-4	-4.37E-1	4.99E-1
GWP	kg CO2-eq	6.64E+1	1.59E+0	2.86E+0	7.08E+1	9.83E-1	2.60E+1	2.41E-1	-3.69E+1	6.11E+1
ODP	kg CFC-11-eq	3.85E-5	2.83E-7	2.69E-7	3.91E-5	1.82E-7	3.06E-6	9.11E-9	-1.91E-5	2.32E-5
POCP	kg ethene-eq	4.10E-2	9.61E-4	1.26E-3	4.33E-2	5.90E-4	5.93E-3	6.41E-5	-1.86E-2	3.12E-2
AP	kg SO2-eq	2.57E-1	7.00E-3	1.12E-2	2.75E-1	4.23E-3	4.34E-2	2.03E-4	-1.19E-1	2.03E-1
EP	kg PO4 3--eq	3.05E-2	1.38E-3	1.77E-3	3.36E-2	8.45E-4	6.57E-3	7.87E-5	-1.44E-2	2.68E-2
HTP	kg 1,4-DB-eq	2.61E+1	6.71E-1	1.08E+0	2.78E+1	4.20E-1	1.17E+1	2.08E-2	-1.16E+1	2.83E+1
FAETP	kg 1,4-DB-eq	5.62E-1	1.96E-2	4.39E-2	6.26E-1	1.23E-2	1.74E-1	6.15E-3	-2.54E-1	5.65E-1
MAETP	kg 1,4-DB-eq	1.64E+3	7.04E+1	1.79E+2	1.89E+3	4.40E+1	5.72E+2	7.54E+0	-7.47E+2	1.77E+3
TETP	kg 1,4-DB-eq	1.79E-1	2.37E-3	6.70E-2	2.48E-1	1.49E-3	4.16E-2	6.90E-5	-8.44E-2	2.07E-1
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.63E+1	1.61E+0	3.37E+0	7.13E+1	9.92E-1	2.85E+1	2.81E-1	-3.80E+1	6.31E+1
GWP-f	kg CO2 eq	6.81E+1	1.61E+0	2.64E+0	7.23E+1	9.91E-1	2.62E+1	2.81E-1	-3.77E+1	6.21E+1
GWP-b	kg CO2 eq	-1.82E+0	7.41E-4	5.70E-1	-1.25E+0	6.02E-4	2.33E+0	3.61E-4	-2.63E-1	8.12E-1
GWP-luluc	kg CO2 eq	5.40E-2	5.89E-4	1.61E-1	2.15E-1	3.51E-4	1.17E-2	7.60E-6	-2.47E-2	2.03E-1
ODP	kg CFC11 eq	3.80E-5	3.54E-7	3.18E-7	3.87E-5	2.28E-7	3.15E-6	1.13E-8	-1.89E-5	2.31E-5
AP	mol H+ eq	3.09E-1	9.31E-3	1.44E-2	3.33E-1	5.64E-3	5.44E-2	2.71E-4	-1.44E-1	2.49E-1
EP-fw	kg P eq	3.00E-3	1.62E-5	3.77E-5	3.06E-3	8.15E-6	3.90E-4	3.43E-7	-1.39E-3	2.06E-3
EP-m	kg N eq	5.18E-2	3.28E-3	4.24E-3	5.94E-2	2.02E-3	1.32E-2	1.67E-4	-2.50E-2	4.98E-2
EP-T	mol N eq	5.61E-1	3.62E-2	4.54E-2	6.43E-1	2.23E-2	1.46E-1	1.09E-3	-2.68E-1	5.45E-1
POCP	kg NMVOC eq	1.95E-1	1.03E-2	1.28E-2	2.18E-1	6.36E-3	4.38E-2	3.69E-4	-9.20E-2	1.77E-1
ADP-mm	kg Sb eq	2.02E-3	4.07E-5	6.00E-5	2.12E-3	2.56E-5	2.15E-4	2.69E-7	-7.75E-4	1.59E-3
ADP-f	MJ	1.75E+3	2.42E+1	3.05E+1	1.81E+3	1.52E+1	1.50E+2	8.21E-1	-9.15E+2	1.06E+3
WDP	m3 depriv.	1.14E+2	8.66E-2	2.06E+1	1.35E+2	4.67E-2	5.83E+0	4.74E-3	-5.43E+1	8.64E+1
PM	disease inc.	2.16E-6	1.44E-7	2.23E-7	2.53E-6	8.95E-8	6.82E-7	5.62E-9	-9.22E-7	2.38E-6
IR	kBq U-235 eq	3.71E+0	1.01E-1	5.51E-2	3.86E+0	6.65E-2	5.23E-1	3.76E-3	-1.76E+0	2.70E+0
ETP-fw	CTUe	1.17E+3	2.16E+1	5.09E+1	1.25E+3	1.24E+1	1.12E+3	1.23E+1	-5.36E+2	1.85E+3
HTP-c	CTUh	4.62E-8	7.01E-10	1.74E-9	4.86E-8	4.40E-10	1.64E-8	2.15E-11	-2.00E-8	4.54E-8
HTP-nc	CTUh	1.47E-6	2.36E-8	5.31E-8	1.55E-6	1.47E-8	3.94E-7	2.37E-9	-6.93E-7	1.27E-6
SQP	Pt	4.29E+2	2.10E+1	2.28E+0	4.52E+2	1.30E+1	9.35E+1	2.08E+0	-1.43E+2	4.18E+2

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.16E+2	3.03E-1	9.20E+1	2.08E+2	2.18E-1	1.07E+1	2.96E-2	-4.87E+1	1.71E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.16E+2	3.03E-1	9.20E+1	2.08E+2	2.18E-1	1.07E+1	2.96E-2	-4.87E+1	1.71E+2
PENRE	MJ	1.88E+3	2.57E+1	3.31E+1	1.94E+3	1.61E+1	1.59E+2	8.71E-1	-9.86E+2	1.13E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.88E+3	2.57E+1	3.31E+1	1.94E+3	1.61E+1	1.59E+2	8.71E-1	-9.86E+2	1.13E+3
PET	MJ	1.99E+3	2.60E+1	1.25E+2	2.15E+3	1.64E+1	1.70E+2	9.01E-1	-1.03E+3	1.30E+3
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	1.23E+0	2.95E-3	4.86E-1	1.72E+0	1.72E-3	1.60E-1	1.01E-3	-5.68E-1	1.31E+0
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.38E-3	6.14E-5	4.27E-5	1.48E-3	3.89E-5	2.41E-4	9.90E-7	-7.62E-4	1.00E-3
NHWD	kg	6.58E+0	1.54E+0	6.16E-2	8.18E+0	9.43E-1	5.56E+0	3.78E+0	-2.91E+0	1.55E+1
RWD	kg	3.27E-3	1.59E-4	7.68E-5	3.50E-3	1.03E-4	5.61E-4	5.36E-6	-1.55E-3	2.62E-3
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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