

Environmental Profile

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

Ecochain v3.5.80



Product: 3024549 - WfxPVC Bend 88° 125 GY/GD SN8 S/SP
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	0.14	0	0.01	0.15	0	0.04	0	-0.07	0.12
ADPE	kg Sb-eq	1.17E-3	4.47E-7	2.17E-6	1.17E-3	4.08E-7	3.60E-6	4.55E-9	-1.38E-5	1.16E-3
ADPF	kg Sb-eq	1.50E-2	1.29E-4	3.73E-4	1.55E-2	1.15E-4	1.25E-3	6.31E-6	-8.16E-3	8.75E-3
GWP	kg CO2-eq	1.23E+0	1.75E-2	7.08E-2	1.32E+0	1.56E-2	4.40E-1	4.42E-3	-6.91E-1	1.09E+0
ODP	kg CFC-11-eq	6.50E-7	3.10E-9	5.60E-9	6.58E-7	2.90E-9	5.07E-8	1.50E-10	-3.33E-7	3.79E-7
POCP	kg ethene-eq	7.43E-4	1.06E-5	3.08E-5	7.85E-4	9.39E-6	9.98E-5	1.13E-6	-3.64E-4	5.30E-4
AP	kg SO2-eq	4.92E-3	7.69E-5	3.05E-4	5.30E-3	6.73E-5	7.24E-4	3.39E-6	-2.34E-3	3.75E-3
EP	kg PO4 3--eq	6.30E-4	1.51E-5	3.91E-5	6.84E-4	1.34E-5	1.11E-4	1.41E-6	-3.18E-4	4.92E-4
HTP	kg 1,4-DB-eq	4.71E-1	7.37E-3	3.29E-2	5.11E-1	6.69E-3	1.92E-1	3.63E-4	-2.19E-1	4.91E-1
FAETP	kg 1,4-DB-eq	1.43E-2	2.15E-4	1.12E-3	1.57E-2	1.96E-4	2.95E-3	1.29E-4	-6.30E-3	1.26E-2
MAETP	kg 1,4-DB-eq	3.33E+1	7.73E-1	4.43E+0	3.85E+1	7.00E-1	1.00E+1	1.52E-1	-1.42E+1	3.52E+1
TETP	kg 1,4-DB-eq	3.41E-3	2.60E-5	2.45E-3	5.89E-3	2.37E-5	6.78E-4	1.18E-6	-2.10E-3	4.49E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.27E+0	1.77E-2	8.11E-2	1.37E+0	1.58E-2	4.72E-1	5.16E-3	-6.45E-1	1.22E+0
GWP-f	kg CO2 eq	1.26E+0	1.76E-2	6.23E-2	1.34E+0	1.58E-2	4.43E-1	5.16E-3	-7.06E-1	1.10E+0
GWP-b	kg CO2 eq	1.14E-2	8.14E-6	1.29E-2	2.42E-2	9.57E-6	2.88E-2	6.35E-6	6.22E-2	1.15E-1
GWP-luluc	kg CO2 eq	1.41E-3	6.46E-6	5.91E-3	7.33E-3	5.58E-6	1.92E-4	1.31E-7	-8.88E-4	6.63E-3
ODP	kg CFC11 eq	6.43E-7	3.89E-9	6.58E-9	6.53E-7	3.63E-9	5.24E-8	1.87E-10	-3.30E-7	3.80E-7
AP	mol H+ eq	5.99E-3	1.02E-4	3.80E-4	6.47E-3	8.98E-5	9.10E-4	4.54E-6	-2.84E-3	4.63E-3
EP-fw	kg P eq	5.90E-5	1.78E-7	1.09E-6	6.03E-5	1.30E-7	6.40E-6	5.94E-9	-2.99E-5	3.69E-5
EP-m	kg N eq	1.07E-3	3.61E-5	8.97E-5	1.20E-3	3.21E-5	2.24E-4	2.97E-6	-5.09E-4	9.47E-4
EP-T	mol N eq	1.16E-2	3.98E-4	9.89E-4	1.29E-2	3.54E-4	2.47E-3	1.81E-5	-5.48E-3	1.03E-2
POCP	kg NMVOC eq	3.79E-3	1.13E-4	2.82E-4	4.18E-3	1.01E-4	7.41E-4	6.27E-6	-1.84E-3	3.19E-3
ADP-mm	kg Sb eq	1.17E-3	4.47E-7	2.17E-6	1.17E-3	4.08E-7	3.60E-6	4.55E-9	-1.38E-5	1.16E-3
ADP-f	MJ	3.20E+1	2.66E-1	6.96E-1	3.30E+1	2.42E-1	2.47E+0	1.36E-2	-1.72E+1	1.85E+1
WDP	m3 depriv.	1.98E+0	9.52E-4	5.39E-1	2.52E+0	7.43E-4	9.56E-2	8.67E-5	-1.04E+0	1.57E+0
PM	disease inc.	4.23E-8	1.58E-9	4.69E-9	4.86E-8	1.42E-9	1.14E-8	9.39E-11	-2.25E-8	3.90E-8
IR	kBq U-235 eq	7.15E-2	1.11E-3	1.11E-3	7.37E-2	1.06E-3	8.69E-3	6.28E-5	-3.45E-2	4.90E-2
ETP-fw	CTUe	3.78E+1	2.37E-1	1.62E+0	3.96E+1	1.97E-1	1.85E+1	2.04E-1	-1.41E+1	4.44E+1
HTP-c	CTUh	1.00E-9	7.70E-12	5.60E-11	1.06E-9	6.99E-12	2.76E-10	3.74E-13	-3.84E-10	9.64E-10
HTP-nc	CTUh	3.28E-8	2.60E-10	1.75E-9	3.48E-8	2.34E-10	6.53E-9	3.94E-11	-1.33E-8	2.83E-8
SQP	Pt	6.76E+0	2.31E-1	5.21E-2	7.04E+0	2.07E-1	1.52E+0	3.49E-2	-1.37E+1	-4.85E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.08E+0	3.33E-3	3.39E+0	5.46E+0	3.47E-3	1.76E-1	5.13E-4	-2.86E+0	2.78E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.08E+0	3.33E-3	3.39E+0	5.46E+0	3.47E-3	1.76E-1	5.13E-4	-2.86E+0	2.78E+0
PENRE	MJ	3.43E+1	2.82E-1	7.53E-1	3.54E+1	2.57E-1	2.63E+0	1.45E-2	-1.85E+1	1.98E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.43E+1	2.82E-1	7.53E-1	3.54E+1	2.57E-1	2.63E+0	1.45E-2	-1.85E+1	1.98E+1
PET	MJ	3.64E+1	2.86E-1	4.14E+0	4.08E+1	2.60E-1	2.80E+0	1.50E-2	-2.13E+1	2.26E+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	2.28E-2	3.24E-5	1.27E-2	3.56E-2	2.74E-5	2.63E-3	1.67E-5	-1.24E-2	2.58E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.67E-4	6.74E-7	7.40E-7	1.69E-4	6.19E-7	4.05E-6	1.66E-8	-1.40E-5	1.59E-4
NHWD	kg	1.28E-1	1.69E-2	1.14E-3	1.46E-1	1.50E-2	9.05E-2	6.00E-2	-5.55E-2	2.56E-1
RWD	kg	6.39E-5	1.75E-6	1.37E-6	6.70E-5	1.65E-6	9.39E-6	8.88E-8	-3.07E-5	4.74E-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



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