

Environmental Profile

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

Ecochain v3.5.80



Product: 3024547 - WfxPVC Bend 30° 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	0.1	0	0.01	0.11	0	0.03	0	-0.05	0.09
ADPE	kg Sb-eq	8.66E-4	3.35E-7	1.43E-6	8.68E-4	3.08E-7	2.67E-6	3.43E-9	-1.03E-5	8.61E-4
ADPF	kg Sb-eq	1.14E-2	9.63E-5	2.45E-4	1.17E-2	8.67E-5	9.27E-4	4.76E-6	-6.16E-3	6.60E-3
GWP	kg CO2-eq	9.20E-1	1.31E-2	4.65E-2	9.79E-1	1.18E-2	3.32E-1	3.37E-3	-5.16E-1	8.10E-1
ODP	kg CFC-11-eq	4.80E-7	2.32E-9	3.68E-9	4.86E-7	2.19E-9	3.74E-8	1.13E-10	-2.47E-7	2.78E-7
POCP	kg ethene-eq	5.67E-4	7.90E-6	2.02E-5	5.95E-4	7.08E-6	7.41E-5	8.62E-7	-2.72E-4	4.05E-4
AP	kg SO2-eq	3.67E-3	5.76E-5	2.00E-4	3.93E-3	5.08E-5	5.37E-4	2.56E-6	-1.73E-3	2.79E-3
EP	kg PO4 3--eq	4.63E-4	1.13E-5	2.57E-5	5.00E-4	1.01E-5	8.21E-5	1.08E-6	-2.28E-4	3.65E-4
HTP	kg 1,4-DB-eq	3.50E-1	5.51E-3	2.16E-2	3.77E-1	5.05E-3	1.43E-1	2.75E-4	-1.61E-1	3.64E-1
FAETP	kg 1,4-DB-eq	1.03E-2	1.61E-4	7.38E-4	1.12E-2	1.48E-4	2.21E-3	1.02E-4	-4.43E-3	9.27E-3
MAETP	kg 1,4-DB-eq	2.47E+1	5.79E-1	2.91E+0	2.82E+1	5.28E-1	7.40E+0	1.19E-1	-1.04E+1	2.58E+1
TETP	kg 1,4-DB-eq	2.50E-3	1.95E-5	1.61E-3	4.12E-3	1.79E-5	5.07E-4	8.89E-7	-1.47E-3	3.18E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.51E-1	1.32E-2	5.32E-2	1.02E+0	1.19E-2	3.52E-1	3.93E-3	-4.92E-1	8.93E-1
GWP-f	kg CO2 eq	9.42E-1	1.32E-2	4.09E-2	9.96E-1	1.19E-2	3.34E-1	3.93E-3	-5.28E-1	8.18E-1
GWP-b	kg CO2 eq	8.12E-3	6.10E-6	8.44E-3	1.66E-2	7.22E-6	1.72E-2	4.79E-6	3.68E-2	7.06E-2
GWP-luluc	kg CO2 eq	9.96E-4	4.84E-6	3.88E-3	4.88E-3	4.21E-6	1.43E-4	9.89E-8	-5.96E-4	4.43E-3
ODP	kg CFC11 eq	4.75E-7	2.91E-9	4.32E-9	4.82E-7	2.74E-9	3.86E-8	1.41E-10	-2.45E-7	2.79E-7
AP	mol H+ eq	4.46E-3	7.66E-5	2.49E-4	4.79E-3	6.78E-5	6.74E-4	3.43E-6	-2.09E-3	3.45E-3
EP-fw	kg P eq	4.35E-5	1.33E-7	7.17E-7	4.43E-5	9.79E-8	4.75E-6	4.48E-9	-2.15E-5	2.77E-5
EP-m	kg N eq	7.88E-4	2.70E-5	5.89E-5	8.74E-4	2.42E-5	1.66E-4	2.28E-6	-3.72E-4	6.95E-4
EP-T	mol N eq	8.53E-3	2.98E-4	6.50E-4	9.48E-3	2.67E-4	1.83E-3	1.37E-5	-4.00E-3	7.59E-3
POCP	kg NMVOC eq	2.84E-3	8.49E-5	1.85E-4	3.11E-3	7.64E-5	5.49E-4	4.74E-6	-1.36E-3	2.38E-3
ADP-mm	kg Sb eq	8.66E-4	3.35E-7	1.43E-6	8.68E-4	3.08E-7	2.67E-6	3.43E-9	-1.03E-5	8.61E-4
ADP-f	MJ	2.43E+1	1.99E-1	4.57E-1	2.49E+1	1.83E-1	1.84E+0	1.03E-2	-1.29E+1	1.40E+1
WDP	m3 depriv.	1.47E+0	7.12E-4	3.54E-1	1.82E+0	5.60E-4	7.09E-2	6.50E-5	-7.66E-1	1.13E+0
PM	disease inc.	3.15E-8	1.19E-9	3.08E-9	3.57E-8	1.07E-9	8.46E-9	7.08E-11	-1.60E-8	2.94E-8
IR	kBq U-235 eq	5.36E-2	8.34E-4	7.27E-4	5.51E-2	7.98E-4	6.45E-3	4.74E-5	-2.52E-2	3.72E-2
ETP-fw	CTUe	2.69E+1	1.78E-1	1.06E+0	2.82E+1	1.48E-1	1.36E+1	1.50E-1	-9.80E+0	3.23E+1
HTP-c	CTUh	7.39E-10	5.76E-12	3.68E-11	7.82E-10	5.28E-12	2.06E-10	2.82E-13	-2.82E-10	7.11E-10
HTP-nc	CTUh	2.42E-8	1.94E-10	1.15E-9	2.55E-8	1.77E-10	4.84E-9	2.92E-11	-9.71E-9	2.09E-8
SQP	Pt	4.68E+0	1.73E-1	3.42E-2	4.88E+0	1.56E-1	1.14E+0	2.64E-2	-8.47E+0	-2.26E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.47E+0	2.49E-3	2.22E+0	3.70E+0	2.62E-3	1.31E-1	3.88E-4	-1.82E+0	2.01E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.47E+0	2.49E-3	2.22E+0	3.70E+0	2.62E-3	1.31E-1	3.88E-4	-1.82E+0	2.01E+0
PENRE	MJ	2.60E+1	2.11E-1	4.94E-1	2.67E+1	1.94E-1	1.95E+0	1.09E-2	-1.39E+1	1.49E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.60E+1	2.11E-1	4.94E-1	2.67E+1	1.94E-1	1.95E+0	1.09E-2	-1.39E+1	1.49E+1
PET	MJ	2.75E+1	2.14E-1	2.72E+0	3.04E+1	1.97E-1	2.09E+0	1.13E-2	-1.58E+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	1.70E-2	2.43E-5	8.37E-3	2.54E-2	2.07E-5	1.95E-3	1.26E-5	-8.97E-3	1.84E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.23E-4	5.05E-7	4.86E-7	1.24E-4	4.67E-7	3.00E-6	1.25E-8	-1.03E-5	1.17E-4
NHWD	kg	9.34E-2	1.26E-2	7.50E-4	1.07E-1	1.13E-2	6.77E-2	4.53E-2	-4.07E-2	1.90E-1
RWD	kg	4.82E-5	1.31E-6	9.00E-7	5.04E-5	1.24E-6	6.97E-6	6.70E-8	-2.24E-5	3.63E-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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