

Environmental Profile

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

Ecochain v3.5.80



Product: 3024555 - WfxPVC Bend 30° 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]

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.11	0	0.01	0.12	0	0.04	0	-0.06	0.1
ADPE	kg Sb-eq	8.66E-4	3.68E-7	1.51E-6	8.68E-4	3.31E-7	2.76E-6	3.69E-9	-1.07E-5	8.61E-4
ADPF	kg Sb-eq	1.27E-2	1.06E-4	2.60E-4	1.31E-2	9.32E-5	9.65E-4	5.12E-6	-6.77E-3	7.35E-3
GWP	kg CO2-eq	9.95E-1	1.44E-2	4.92E-2	1.06E+0	1.27E-2	3.60E-1	3.75E-3	-5.58E-1	8.77E-1
ODP	kg CFC-11-eq	4.80E-7	2.56E-9	3.89E-9	4.87E-7	2.35E-9	3.75E-8	1.22E-10	-2.53E-7	2.74E-7
POCP	kg ethene-eq	6.50E-4	8.70E-6	2.14E-5	6.80E-4	7.62E-6	7.81E-5	9.46E-7	-2.99E-4	4.67E-4
AP	kg SO2-eq	3.96E-3	6.34E-5	2.12E-4	4.23E-3	5.46E-5	5.55E-4	2.75E-6	-1.84E-3	3.00E-3
EP	kg PO4 3--eq	4.94E-4	1.25E-5	2.72E-5	5.34E-4	1.09E-5	8.56E-5	1.23E-6	-2.42E-4	3.90E-4
HTP	kg 1,4-DB-eq	3.69E-1	6.07E-3	2.29E-2	3.98E-1	5.43E-3	1.51E-1	3.02E-4	-1.69E-1	3.86E-1
FAETP	kg 1,4-DB-eq	1.08E-2	1.77E-4	7.81E-4	1.18E-2	1.59E-4	2.37E-3	1.28E-4	-4.66E-3	9.80E-3
MAETP	kg 1,4-DB-eq	2.61E+1	6.37E-1	3.08E+0	2.98E+1	5.68E-1	7.74E+0	1.45E-1	-1.09E+1	2.74E+1
TETP	kg 1,4-DB-eq	2.55E-3	2.15E-5	1.70E-3	4.28E-3	1.92E-5	5.31E-4	9.41E-7	-1.54E-3	3.29E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.03E+0	1.46E-2	5.64E-2	1.10E+0	1.28E-2	3.82E-1	4.37E-3	-5.32E-1	9.66E-1
GWP-f	kg CO2 eq	1.02E+0	1.45E-2	4.33E-2	1.08E+0	1.28E-2	3.63E-1	4.37E-3	-5.72E-1	8.86E-1
GWP-b	kg CO2 eq	7.64E-3	6.71E-6	8.94E-3	1.66E-2	7.77E-6	1.87E-2	5.17E-6	4.01E-2	7.54E-2
GWP-luluc	kg CO2 eq	1.04E-3	5.33E-6	4.11E-3	5.16E-3	4.53E-6	1.46E-4	1.06E-7	-6.32E-4	4.68E-3
ODP	kg CFC11 eq	4.77E-7	3.21E-9	4.58E-9	4.85E-7	2.95E-9	3.88E-8	1.51E-10	-2.50E-7	2.76E-7
AP	mol H+ eq	4.80E-3	8.43E-5	2.64E-4	5.15E-3	7.29E-5	6.98E-4	3.68E-6	-2.23E-3	3.70E-3
EP-fw	kg P eq	4.51E-5	1.47E-7	7.59E-7	4.61E-5	1.05E-7	4.84E-6	4.82E-9	-2.24E-5	2.86E-5
EP-m	kg N eq	8.42E-4	2.97E-5	6.24E-5	9.34E-4	2.61E-5	1.74E-4	2.59E-6	-3.97E-4	7.39E-4
EP-T	mol N eq	9.15E-3	3.28E-4	6.88E-4	1.02E-2	2.87E-4	1.91E-3	1.47E-5	-4.28E-3	8.10E-3
POCP	kg NMVOC eq	3.14E-3	9.35E-5	1.96E-4	3.43E-3	8.21E-5	5.76E-4	5.13E-6	-1.47E-3	2.62E-3
ADP-mm	kg Sb eq	8.66E-4	3.68E-7	1.51E-6	8.68E-4	3.31E-7	2.76E-6	3.69E-9	-1.07E-5	8.61E-4
ADP-f	MJ	2.70E+1	2.19E-1	4.84E-1	2.77E+1	1.96E-1	1.92E+0	1.11E-2	-1.42E+1	1.56E+1
WDP	m3 depriv.	1.51E+0	7.84E-4	3.75E-1	1.88E+0	6.03E-4	7.18E-2	6.84E-5	-8.00E-1	1.16E+0
PM	disease inc.	3.54E-8	1.31E-9	3.26E-9	4.00E-8	1.15E-9	8.90E-9	7.62E-11	-1.73E-8	3.28E-8
IR	kBq U-235 eq	5.78E-2	9.19E-4	7.70E-4	5.95E-2	8.58E-4	6.67E-3	5.11E-5	-2.63E-2	4.09E-2
ETP-fw	CTUe	2.80E+1	1.96E-1	1.12E+0	2.93E+1	1.59E-1	1.35E+1	1.49E-1	-1.03E+1	3.28E+1
HTP-c	CTUh	7.60E-10	6.34E-12	3.89E-11	8.05E-10	5.67E-12	2.16E-10	3.01E-13	-2.93E-10	7.33E-10
HTP-nc	CTUh	2.46E-8	2.14E-10	1.22E-9	2.60E-8	1.90E-10	4.94E-9	2.93E-11	-1.01E-8	2.11E-8
SQP	Pt	5.06E+0	1.90E-1	3.62E-2	5.29E+0	1.68E-1	1.21E+0	2.83E-2	-9.13E+0	-2.44E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.56E+0	2.75E-3	2.35E+0	3.92E+0	2.82E-3	1.34E-1	4.21E-4	-1.95E+0	2.10E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.56E+0	2.75E-3	2.35E+0	3.92E+0	2.82E-3	1.34E-1	4.21E-4	-1.95E+0	2.10E+0
PENRE	MJ	2.89E+1	2.33E-1	5.23E-1	2.97E+1	2.08E-1	2.04E+0	1.17E-2	-1.53E+1	1.67E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.89E+1	2.33E-1	5.23E-1	2.97E+1	2.08E-1	2.04E+0	1.17E-2	-1.53E+1	1.67E+1
PET	MJ	3.05E+1	2.36E-1	2.88E+0	3.36E+1	2.11E-1	2.17E+0	1.22E-2	-1.73E+1	1.88E+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	1.80E-2	2.67E-5	8.86E-3	2.69E-2	2.22E-5	1.99E-3	1.36E-5	-9.49E-3	1.95E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.22E-4	5.56E-7	5.14E-7	1.23E-4	5.02E-7	3.14E-6	1.34E-8	-1.08E-5	1.16E-4
NHWD	kg	9.72E-2	1.39E-2	7.94E-4	1.12E-1	1.22E-2	7.21E-2	4.87E-2	-4.24E-2	2.03E-1
RWD	kg	5.37E-5	1.44E-6	9.53E-7	5.61E-5	1.34E-6	7.28E-6	7.21E-8	-2.34E-5	4.14E-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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