

Environmental Profile

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

Ecochain v3.5.80



Product: 3004161 - PVC RWA Insert Reducer GY 80x70
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	0.02	0	0	0.02	0	0.01	0	-0.01	0.02
ADPE	kg Sb-eq	1.58E-4	5.43E-8	2.41E-7	1.58E-4	5.18E-8	4.66E-7	5.78E-10	-1.79E-6	1.57E-4
ADPF	kg Sb-eq	1.83E-3	1.56E-5	4.14E-5	1.89E-3	1.46E-5	1.61E-4	8.01E-7	-1.01E-3	1.06E-3
GWP	kg CO2-eq	1.53E-1	2.12E-3	7.85E-3	1.63E-1	1.98E-3	5.53E-2	5.45E-4	-8.59E-2	1.35E-1
ODP	kg CFC-11-eq	8.70E-8	3.77E-10	6.20E-10	8.80E-8	3.68E-10	6.79E-9	1.91E-11	-4.39E-8	5.13E-8
POCP	kg ethene-eq	8.79E-5	1.28E-6	3.41E-6	9.26E-5	1.19E-6	1.27E-5	1.41E-7	-4.44E-5	6.22E-5
AP	kg SO2-eq	6.14E-4	9.34E-6	3.37E-5	6.57E-4	8.54E-6	9.40E-5	4.31E-7	-2.90E-4	4.70E-4
EP	kg PO4 3--eq	7.78E-5	1.84E-6	4.34E-6	8.39E-5	1.71E-6	1.42E-5	1.70E-7	-3.81E-5	6.19E-5
HTP	kg 1,4-DB-eq	5.99E-2	8.94E-4	3.65E-3	6.44E-2	8.49E-4	2.45E-2	4.52E-5	-2.78E-2	6.21E-2
FAETP	kg 1,4-DB-eq	1.76E-3	2.61E-5	1.25E-4	1.91E-3	2.49E-5	3.73E-4	1.39E-5	-7.39E-4	1.58E-3
MAETP	kg 1,4-DB-eq	4.23E+0	9.39E-2	4.91E-1	4.81E+0	8.88E-2	1.28E+0	1.70E-2	-1.80E+0	4.40E+0
TETP	kg 1,4-DB-eq	4.41E-4	3.16E-6	2.71E-4	7.15E-4	3.01E-6	8.76E-5	1.52E-7	-2.47E-4	5.59E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.58E-1	2.14E-3	8.98E-3	1.69E-1	2.00E-3	5.82E-2	6.35E-4	-8.27E-2	1.48E-1
GWP-f	kg CO2 eq	1.57E-1	2.14E-3	6.90E-3	1.66E-1	2.00E-3	5.57E-2	6.35E-4	-8.78E-2	1.36E-1
GWP-b	kg CO2 eq	1.55E-3	9.89E-7	1.42E-3	2.97E-3	1.21E-6	2.49E-3	8.03E-7	5.22E-3	1.07E-2
GWP-luluc	kg CO2 eq	1.68E-4	7.85E-7	6.55E-4	8.24E-4	7.08E-7	2.52E-5	1.67E-8	-9.59E-5	7.54E-4
ODP	kg CFC11 eq	8.58E-8	4.73E-10	7.29E-10	8.70E-8	4.61E-10	6.99E-9	2.37E-11	-4.34E-8	5.11E-8
AP	mol H+ eq	7.46E-4	1.24E-5	4.21E-5	8.00E-4	1.14E-5	1.18E-4	5.77E-7	-3.50E-4	5.80E-4
EP-fw	kg P eq	7.55E-6	2.16E-8	1.21E-7	7.69E-6	1.65E-8	8.45E-7	7.54E-10	-3.66E-6	4.90E-6
EP-m	kg N eq	1.32E-4	4.38E-6	9.94E-6	1.46E-4	4.08E-6	2.87E-5	3.57E-7	-6.21E-5	1.17E-4
EP-T	mol N eq	1.43E-3	4.83E-5	1.10E-4	1.59E-3	4.49E-5	3.16E-4	2.30E-6	-6.66E-4	1.28E-3
POCP	kg NMVOC eq	4.60E-4	1.38E-5	3.12E-5	5.05E-4	1.28E-5	9.45E-5	7.91E-7	-2.24E-4	3.89E-4
ADP-mm	kg Sb eq	1.58E-4	5.43E-8	2.41E-7	1.58E-4	5.18E-8	4.66E-7	5.78E-10	-1.79E-6	1.57E-4
ADP-f	MJ	3.91E+0	3.23E-2	7.72E-2	4.02E+0	3.07E-2	3.19E-1	1.73E-3	-2.12E+0	2.25E+0
WDP	m3 depriv.	2.60E-1	1.16E-4	5.97E-2	3.20E-1	9.42E-5	1.27E-2	1.12E-5	-1.32E-1	2.01E-1
PM	disease inc.	4.95E-9	1.92E-10	5.20E-10	5.66E-9	1.81E-10	1.45E-9	1.19E-11	-2.59E-9	4.72E-9
IR	kBq U-235 eq	8.93E-3	1.35E-4	1.23E-4	9.18E-3	1.34E-4	1.13E-3	7.95E-6	-4.33E-3	6.12E-3
ETP-fw	CTUe	4.60E+0	2.88E-2	1.79E-1	4.81E+0	2.49E-2	2.50E+0	2.76E-2	-1.63E+0	5.74E+0
HTP-c	CTUh	1.30E-10	9.35E-13	6.20E-12	1.37E-10	8.87E-13	3.54E-11	4.78E-14	-4.86E-11	1.25E-10
HTP-nc	CTUh	4.31E-9	3.15E-11	1.94E-10	4.54E-9	2.97E-11	8.62E-10	5.30E-12	-1.68E-9	3.75E-9
SQP	Pt	7.46E-1	2.80E-2	5.77E-3	7.80E-1	2.63E-2	1.95E-1	4.43E-3	-1.26E+0	-2.57E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.45E-1	4.05E-4	3.75E-1	6.20E-1	4.41E-4	2.32E-2	6.46E-5	-2.79E-1	3.65E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.45E-1	4.05E-4	3.75E-1	6.20E-1	4.41E-4	2.32E-2	6.46E-5	-2.79E-1	3.65E-1
PENRE	MJ	4.19E+0	3.43E-2	8.34E-2	4.31E+0	3.26E-2	3.39E-1	1.84E-3	-2.28E+0	2.41E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.19E+0	3.43E-2	8.34E-2	4.31E+0	3.26E-2	3.39E-1	1.84E-3	-2.28E+0	2.41E+0
PET	MJ	4.44E+0	3.47E-2	4.59E-1	4.93E+0	3.30E-2	3.63E-1	1.90E-3	-2.56E+0	2.77E+0
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	2.90E-3	3.94E-6	1.41E-3	4.32E-3	3.48E-6	3.48E-4	2.12E-6	-1.50E-3	3.17E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.26E-5	8.19E-8	8.19E-8	2.28E-5	7.85E-8	5.20E-7	2.11E-9	-1.78E-6	2.16E-5
NHWD	kg	1.62E-2	2.05E-3	1.27E-4	1.83E-2	1.90E-3	1.15E-2	7.61E-3	-7.02E-3	3.23E-2
RWD	kg	7.74E-6	2.12E-7	1.52E-7	8.10E-6	2.09E-7	1.21E-6	1.13E-8	-3.84E-6	5.69E-6
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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