

Environmental Profile

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

Ecochain v3.5.80



Product: 3024287 - PVC Concrete Saddle GY 160 SN8 BENOR
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	0.32	0	0.01	0.33	0	0.11	0	-0.12	0.32
ADPE	kg Sb-eq	2.02E-3	7.91E-7	2.72E-6	2.03E-3	6.89E-7	5.24E-6	8.97E-9	-3.16E-5	2.00E-3
ADPF	kg Sb-eq	3.42E-2	2.28E-4	4.67E-4	3.49E-2	1.94E-4	1.84E-3	1.24E-5	-1.49E-2	2.21E-2
GWP	kg CO2-eq	2.70E+0	3.10E-2	8.86E-2	2.82E+0	2.64E-2	1.55E+0	9.52E-3	-1.33E+0	3.08E+0
ODP	kg CFC-11-eq	1.10E-6	5.49E-9	7.01E-9	1.12E-6	4.90E-9	7.36E-8	2.97E-10	-5.06E-7	6.88E-7
POCP	kg ethene-eq	2.16E-3	1.87E-5	3.85E-5	2.22E-3	1.58E-5	1.46E-4	2.37E-6	-5.82E-4	1.80E-3
AP	kg SO2-eq	1.19E-2	1.36E-4	3.81E-4	1.25E-2	1.14E-4	1.13E-3	6.74E-6	-3.55E-3	1.02E-2
EP	kg PO4 3--eq	1.50E-3	2.67E-5	4.90E-5	1.58E-3	2.27E-5	1.88E-4	4.26E-6	-4.79E-4	1.31E-3
HTP	kg 1,4-DB-eq	1.11E+0	1.30E-2	4.12E-2	1.16E+0	1.13E-2	2.76E-1	7.09E-4	-3.35E-1	1.12E+0
FAETP	kg 1,4-DB-eq	3.92E-2	3.81E-4	1.41E-3	4.10E-2	3.31E-4	4.34E-3	2.33E-4	-8.93E-3	3.70E-2
MAETP	kg 1,4-DB-eq	8.24E+1	1.37E+0	5.54E+0	8.93E+1	1.18E+0	1.45E+1	2.76E-1	-2.14E+1	8.39E+1
TETP	kg 1,4-DB-eq	8.49E-3	4.61E-5	3.06E-3	1.16E-2	4.00E-5	1.02E-3	2.39E-6	-2.92E-3	9.74E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.69E+0	3.13E-2	1.01E-1	2.82E+0	2.66E-2	1.63E+0	1.11E-2	-1.29E+0	3.20E+0
GWP-f	kg CO2 eq	2.76E+0	3.12E-2	7.80E-2	2.87E+0	2.66E-2	1.56E+0	1.11E-2	-1.36E+0	3.11E+0
GWP-b	kg CO2 eq	-7.75E-2	1.44E-5	1.61E-2	-6.14E-2	1.62E-5	7.45E-2	1.28E-5	7.49E-2	8.80E-2
GWP-luluc	kg CO2 eq	3.87E-3	1.14E-5	7.40E-3	1.13E-2	9.42E-6	2.77E-4	2.60E-7	-1.19E-3	1.04E-2
ODP	kg CFC11 eq	1.13E-6	6.89E-9	8.24E-9	1.15E-6	6.13E-9	7.61E-8	3.69E-10	-5.07E-7	7.24E-7
AP	mol H+ eq	1.44E-2	1.81E-4	4.75E-4	1.51E-2	1.52E-4	1.42E-3	9.02E-6	-4.31E-3	1.23E-2
EP-fw	kg P eq	1.26E-4	3.15E-7	1.37E-6	1.28E-4	2.19E-7	9.28E-6	1.18E-8	-4.23E-5	9.51E-5
EP-m	kg N eq	2.43E-3	6.38E-5	1.12E-4	2.61E-3	5.43E-5	3.68E-4	9.19E-6	-8.02E-4	2.24E-3
EP-T	mol N eq	2.67E-2	7.04E-4	1.24E-3	2.86E-2	5.98E-4	4.06E-3	3.60E-5	-8.66E-3	2.46E-2
POCP	kg NMVOC eq	9.82E-3	2.01E-4	3.52E-4	1.04E-2	1.71E-4	1.19E-3	1.26E-5	-2.95E-3	8.79E-3
ADP-mm	kg Sb eq	2.02E-3	7.91E-7	2.72E-6	2.03E-3	6.89E-7	5.24E-6	8.97E-9	-3.16E-5	2.00E-3
ADP-f	MJ	7.16E+1	4.71E-1	8.71E-1	7.30E+1	4.09E-1	3.63E+0	2.70E-2	-3.05E+1	4.66E+1
WDP	m3 depriv.	3.45E+0	1.68E-3	6.74E-1	4.12E+0	1.25E-3	1.47E-1	1.58E-4	-1.47E+0	2.80E+0
PM	disease inc.	1.30E-7	2.80E-9	5.87E-9	1.38E-7	2.40E-9	1.68E-8	1.85E-10	-3.28E-8	1.25E-7
IR	kBq U-235 eq	1.84E-1	1.97E-3	1.39E-3	1.87E-1	1.79E-3	1.27E-2	1.26E-4	-5.23E-2	1.49E-1
ETP-fw	CTUe	6.62E+1	4.20E-1	2.02E+0	6.87E+1	3.32E-1	2.77E+1	3.05E-1	-1.98E+1	7.72E+1
HTP-c	CTUh	1.92E-9	1.36E-11	7.01E-11	2.01E-9	1.18E-11	4.00E-10	7.34E-13	-5.70E-10	1.85E-9
HTP-nc	CTUh	5.89E-8	4.59E-10	2.19E-9	6.16E-8	3.96E-10	9.89E-9	6.24E-11	-1.90E-8	5.29E-8
SQP	Pt	1.56E+1	4.09E-1	6.52E-2	1.61E+1	3.50E-1	2.22E+0	6.90E-2	-1.72E+1	1.53E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.26E+0	5.90E-3	4.24E+0	8.50E+0	5.86E-3	2.56E-1	1.08E-3	-3.65E+0	5.12E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.26E+0	5.90E-3	4.24E+0	8.50E+0	5.86E-3	2.56E-1	1.08E-3	-3.65E+0	5.12E+0
PENRE	MJ	7.66E+1	5.00E-1	9.42E-1	7.81E+1	4.34E-1	3.87E+0	2.86E-2	-3.30E+1	4.94E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.66E+1	5.00E-1	9.42E-1	7.81E+1	4.34E-1	3.87E+0	2.86E-2	-3.30E+1	4.94E+1
PET	MJ	8.09E+1	5.06E-1	5.18E+0	8.66E+1	4.40E-1	4.12E+0	2.97E-2	-3.67E+1	5.45E+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	4.97E-2	5.74E-5	1.59E-2	6.57E-2	4.62E-5	4.93E-3	3.32E-5	-1.78E-2	5.30E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.53E-4	1.19E-6	9.25E-7	2.55E-4	1.05E-6	6.50E-6	3.26E-8	-2.71E-5	2.35E-4
NHWD	kg	2.69E-1	2.99E-2	1.43E-3	3.00E-1	2.53E-2	1.51E-1	1.18E-1	-8.11E-2	5.14E-1
RWD	kg	2.01E-4	3.09E-6	1.72E-6	2.06E-4	2.78E-6	1.37E-5	1.76E-7	-4.86E-5	1.74E-4
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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