

Environmental Profile

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

Ecochain v3.5.80



Product: 3004162 - PVC RWA Insert Reducer GY 100x80
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]

Statement of Confidentiality

This document and supporting material contain confidential and proprietary business information of Wavin - NL - Hardenberg - Verified. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - NL - Hardenberg - Verified.

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	1.78E-4	6.37E-8	2.76E-7	1.79E-4	5.86E-8	5.37E-7	6.54E-10	-2.05E-6	1.77E-4
ADPF	kg Sb-eq	2.11E-3	1.83E-5	4.75E-5	2.17E-3	1.65E-5	1.85E-4	9.06E-7	-1.16E-3	1.22E-3
GWP	kg CO2-eq	1.77E-1	2.49E-3	9.01E-3	1.89E-1	2.25E-3	6.32E-2	6.16E-4	-9.98E-2	1.55E-1
ODP	kg CFC-11-eq	9.90E-8	4.42E-10	7.12E-10	1.00E-7	4.16E-10	7.74E-9	2.16E-11	-5.00E-8	5.83E-8
POCP	kg ethene-eq	1.02E-4	1.50E-6	3.92E-6	1.07E-4	1.35E-6	1.47E-5	1.60E-7	-5.21E-5	7.11E-5
AP	kg SO2-eq	7.11E-4	1.10E-5	3.87E-5	7.61E-4	9.66E-6	1.08E-4	4.87E-7	-3.45E-4	5.34E-4
EP	kg PO4 3--eq	9.28E-5	2.15E-6	4.98E-6	9.99E-5	1.93E-6	1.64E-5	1.92E-7	-4.79E-5	7.06E-5
HTP	kg 1,4-DB-eq	6.92E-2	1.05E-3	4.19E-3	7.44E-2	9.61E-4	2.81E-2	5.12E-5	-3.27E-2	7.08E-2
FAETP	kg 1,4-DB-eq	2.16E-3	3.06E-5	1.43E-4	2.33E-3	2.81E-5	4.30E-4	1.58E-5	-9.66E-4	1.84E-3
MAETP	kg 1,4-DB-eq	4.90E+0	1.10E-1	5.63E-1	5.57E+0	1.01E-1	1.49E+0	1.93E-2	-2.12E+0	5.06E+0
TETP	kg 1,4-DB-eq	5.17E-4	3.71E-6	3.11E-4	8.32E-4	3.40E-6	9.96E-5	1.72E-7	-3.23E-4	6.12E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.83E-1	2.52E-3	1.03E-2	1.96E-1	2.27E-3	6.84E-2	7.19E-4	-9.16E-2	1.76E-1
GWP-f	kg CO2 eq	1.81E-1	2.51E-3	7.93E-3	1.92E-1	2.26E-3	6.36E-2	7.18E-4	-1.02E-1	1.57E-1
GWP-b	kg CO2 eq	1.81E-3	1.16E-6	1.64E-3	3.45E-3	1.37E-6	4.79E-3	9.08E-7	1.04E-2	1.87E-2
GWP-luluc	kg CO2 eq	2.15E-4	9.21E-7	7.52E-4	9.68E-4	8.01E-7	2.87E-5	1.89E-8	-1.40E-4	8.58E-4
ODP	kg CFC11 eq	9.77E-8	5.55E-10	8.37E-10	9.91E-8	5.22E-10	7.97E-9	2.68E-11	-4.95E-8	5.81E-8
AP	mol H+ eq	8.67E-4	1.46E-5	4.83E-5	9.30E-4	1.29E-5	1.36E-4	6.52E-7	-4.18E-4	6.62E-4
EP-fw	kg P eq	8.83E-6	2.54E-8	1.39E-7	8.99E-6	1.86E-8	9.61E-7	8.54E-10	-4.53E-6	5.44E-6
EP-m	kg N eq	1.57E-4	5.14E-6	1.14E-5	1.74E-4	4.61E-6	3.33E-5	4.04E-7	-7.52E-5	1.37E-4
EP-T	mol N eq	1.69E-3	5.66E-5	1.26E-4	1.87E-3	5.08E-5	3.67E-4	2.60E-6	-8.11E-4	1.48E-3
POCP	kg NMVOC eq	5.37E-4	1.62E-5	3.58E-5	5.89E-4	1.45E-5	1.10E-4	8.95E-7	-2.67E-4	4.47E-4
ADP-mm	kg Sb eq	1.78E-4	6.37E-8	2.76E-7	1.79E-4	5.86E-8	5.37E-7	6.54E-10	-2.05E-6	1.77E-4
ADP-f	MJ	4.49E+0	3.79E-2	8.86E-2	4.62E+0	3.47E-2	3.65E-1	1.96E-3	-2.44E+0	2.58E+0
WDP	m3 depriv.	2.96E-1	1.36E-4	6.86E-2	3.65E-1	1.07E-4	1.44E-2	1.27E-5	-1.56E-1	2.24E-1
PM	disease inc.	5.96E-9	2.26E-10	5.97E-10	6.78E-9	2.04E-10	1.68E-9	1.35E-11	-3.36E-9	5.31E-9
IR	kBq U-235 eq	1.03E-2	1.59E-4	1.41E-4	1.06E-2	1.52E-4	1.30E-3	9.00E-6	-5.18E-3	6.87E-3
ETP-fw	CTUe	5.77E+0	3.38E-2	2.06E-1	6.01E+0	2.82E-2	2.84E+0	3.13E-2	-2.18E+0	6.72E+0
HTP-c	CTUh	1.50E-10	1.10E-12	7.12E-12	1.58E-10	1.00E-12	4.07E-11	5.41E-14	-5.76E-11	1.42E-10
HTP-nc	CTUh	4.94E-9	3.70E-11	2.22E-10	5.20E-9	3.36E-11	9.83E-10	5.99E-12	-1.99E-9	4.23E-9
SQP	Pt	1.03E+0	3.29E-2	6.62E-3	1.07E+0	2.97E-2	2.22E-1	5.02E-3	-2.24E+0	-9.16E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.15E-1	4.75E-4	4.31E-1	7.46E-1	4.99E-4	2.63E-2	7.31E-5	-4.63E-1	3.11E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.15E-1	4.75E-4	4.31E-1	7.46E-1	4.99E-4	2.63E-2	7.31E-5	-4.63E-1	3.11E-1
PENRE	MJ	4.82E+0	4.02E-2	9.58E-2	4.95E+0	3.69E-2	3.88E-1	2.08E-3	-2.63E+0	2.76E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.82E+0	4.02E-2	9.58E-2	4.95E+0	3.69E-2	3.88E-1	2.08E-3	-2.63E+0	2.76E+0
PET	MJ	5.13E+0	4.07E-2	5.26E-1	5.70E+0	3.74E-2	4.15E-1	2.15E-3	-3.09E+0	3.07E+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	3.34E-3	4.62E-6	1.62E-3	4.97E-3	3.93E-6	3.95E-4	2.40E-6	-1.87E-3	3.50E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.57E-5	9.61E-8	9.41E-8	2.59E-5	8.89E-8	5.99E-7	2.38E-9	-2.08E-6	2.45E-5
NHWD	kg	1.91E-2	2.40E-3	1.45E-4	2.16E-2	2.15E-3	1.32E-2	8.61E-3	-8.30E-3	3.73E-2
RWD	kg	8.97E-6	2.49E-7	1.74E-7	9.39E-6	2.36E-7	1.39E-6	1.27E-8	-4.62E-6	6.41E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777