

Environmental Profile

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

Ecochain v3.5.80



Product: 3017575 - PVCU Branch 87° BR 400x110 SN4 UD
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

PVC external sewage pipes with a solid wall are produced in two classes of circumferential stiffness (SN8, SN4), which enables optimal selection depending on the load conditions. A wide portfolio of system fittings facilitates the construction of many schemes of sewage networks, as well as connections with systems made of other materials. Diameter range DN/OD 110-500mm. The pipes meet the requirements of the PN-EN 1401-1 standard.

LCA standard: EN15804+A2 (2019)
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 - PL -Buk - Extra products (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

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	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.24E+1	1.93E-1	3.44E-2	2.26E+1	3.46E-1	1.28E+1	9.62E-2	-1.31E+1	2.28E+1
GWP-f	kg CO2 eq	2.49E+1	1.93E-1	3.47E-2	2.51E+1	3.46E-1	1.02E+1	9.62E-2	-1.31E+1	2.27E+1
GWP-b	kg CO2 eq	-2.47E+0	1.17E-4	-3.67E-4	-2.47E+0	2.10E-4	2.66E+0	1.23E-4	-8.57E-2	1.00E-1
GWP-luluc	kg CO2 eq	2.01E-2	6.83E-5	3.55E-5	2.02E-2	1.22E-4	3.93E-3	2.63E-6	-8.41E-3	1.58E-2
ODP	kg CFC11 eq	1.28E-5	4.44E-8	1.96E-9	1.29E-5	7.97E-8	1.04E-6	3.94E-9	-6.27E-6	7.75E-6
AP	mol H+ eq	1.14E-1	1.10E-3	3.51E-4	1.15E-1	1.97E-3	1.87E-2	9.41E-5	-4.85E-2	8.73E-2
EP-fw	kg P eq	1.05E-3	1.59E-6	1.96E-6	1.06E-3	2.84E-6	1.30E-4	1.18E-7	-4.60E-4	7.29E-4
EP-m	kg N eq	1.93E-2	3.93E-4	3.69E-5	1.98E-2	7.05E-4	4.63E-3	6.05E-5	-8.61E-3	1.65E-2
EP-T	mol N eq	2.11E-1	4.33E-3	4.41E-4	2.16E-1	7.77E-3	5.10E-2	3.77E-4	-9.36E-2	1.82E-1
POCP	kg NMVOC eq	7.45E-2	1.24E-3	1.49E-4	7.59E-2	2.22E-3	1.53E-2	1.28E-4	-3.15E-2	6.20E-2
ADP-mm	kg Sb eq	1.57E-3	4.99E-6	4.67E-6	1.58E-3	8.94E-6	7.27E-5	9.33E-8	-2.66E-4	1.39E-3
ADP-f	MJ	6.33E+2	2.96E+0	3.22E-1	6.36E+2	5.31E+0	5.10E+1	2.85E-1	-3.12E+2	3.81E+2
WDP	m3 depriv.	3.83E+1	9.08E-3	1.24E-2	3.83E+1	1.63E-2	1.94E+0	1.66E-3	-1.78E+1	2.25E+1
PM	disease inc.	9.13E-7	1.74E-8	2.16E-9	9.33E-7	3.12E-8	2.35E-7	1.95E-9	-3.20E-7	8.81E-7
IR	kBq U-235 eq	1.36E+0	1.29E-2	2.42E-4	1.38E+0	2.32E-2	1.77E-1	1.31E-3	-5.83E-1	9.96E-1
ETP-fw	CTUe	4.37E+2	2.40E+0	2.87E+0	4.42E+2	4.31E+0	3.67E+2	4.02E+0	-1.85E+2	6.33E+2
HTP-c	CTUh	1.74E-8	8.55E-11	1.47E-10	1.77E-8	1.53E-10	5.77E-9	7.37E-12	-6.73E-9	1.69E-8
HTP-nc	CTUh	5.26E-7	2.87E-9	3.72E-9	5.33E-7	5.14E-9	1.33E-7	7.80E-10	-2.31E-7	4.41E-7
SQP	Pt	3.26E+2	2.53E+0	5.32E-1	3.29E+2	4.54E+0	3.23E+1	7.21E-1	-8.39E+1	2.83E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.09E+1	4.25E-2	5.71E+0	9.67E+1	7.61E-2	3.59E+0	1.02E-2	-2.34E+1	7.70E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.09E+1	4.25E-2	5.71E+0	9.67E+1	7.61E-2	3.59E+0	1.02E-2	-2.34E+1	7.70E+1
PENRE	MJ	6.79E+2	3.14E+0	3.43E-1	6.82E+2	5.63E+0	5.43E+1	3.03E-1	-3.36E+2	4.06E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.79E+2	3.14E+0	3.43E-1	6.82E+2	5.63E+0	5.43E+1	3.03E-1	-3.36E+2	4.06E+2
PET	MJ	7.69E+2	3.19E+0	6.06E+0	7.79E+2	5.71E+0	5.79E+1	3.13E-1	-3.60E+2	4.83E+2
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	4.30E-1	3.35E-4	3.47E-4	4.31E-1	6.01E-4	5.45E-2	3.49E-4	-1.87E-1	2.99E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.72E-4	7.57E-6	6.49E-11	5.79E-4	1.36E-5	8.30E-5	3.44E-7	-2.64E-4	4.12E-4
NHWD	kg	2.45E+0	1.83E-1	2.51E-4	2.63E+0	3.29E-1	1.99E+0	1.33E+0	-9.72E-1	5.31E+0
RWD	kg	1.27E-3	2.01E-5	2.61E-11	1.29E-3	3.61E-5	1.92E-4	1.87E-6	-5.18E-4	1.00E-3
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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