

Environmental Profile

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

Ecochain v3.5.80



Product: 3017587 - PVCU Branch 87° BR 500x200 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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.03E+1	4.44E-1	8.48E-2	5.09E+1	7.59E-1	2.75E+1	2.11E-1	-2.91E+1	5.02E+1
GWP-f	kg CO2 eq	5.49E+1	4.44E-1	8.57E-2	5.54E+1	7.58E-1	2.24E+1	2.11E-1	-2.89E+1	5.00E+1
GWP-b	kg CO2 eq	-4.60E+0	2.69E-4	-9.04E-4	-4.60E+0	4.60E-4	5.01E+0	2.70E-4	-1.89E-1	2.19E-1
GWP-luluc	kg CO2 eq	4.38E-2	1.57E-4	8.75E-5	4.41E-2	2.68E-4	8.69E-3	5.73E-6	-1.85E-2	3.46E-2
ODP	kg CFC11 eq	2.84E-5	1.02E-7	4.84E-9	2.85E-5	1.75E-7	2.32E-6	8.65E-9	-1.39E-5	1.72E-5
AP	mol H+ eq	2.49E-1	2.53E-3	8.64E-4	2.53E-1	4.32E-3	4.11E-2	2.06E-4	-1.07E-1	1.91E-1
EP-fw	kg P eq	2.32E-3	3.65E-6	4.83E-6	2.33E-3	6.24E-6	2.88E-4	2.58E-7	-1.02E-3	1.61E-3
EP-m	kg N eq	4.23E-2	9.04E-4	9.09E-5	4.33E-2	1.55E-3	1.02E-2	1.33E-4	-1.89E-2	3.63E-2
EP-T	mol N eq	4.62E-1	9.97E-3	1.09E-3	4.73E-1	1.70E-2	1.12E-1	8.27E-4	-2.05E-1	3.98E-1
POCP	kg NMVOC eq	1.63E-1	2.85E-3	3.68E-4	1.66E-1	4.87E-3	3.36E-2	2.80E-4	-6.94E-2	1.35E-1
ADP-mm	kg Sb eq	2.32E-3	1.15E-5	1.15E-5	2.34E-3	1.96E-5	1.60E-4	2.04E-7	-5.86E-4	1.94E-3
ADP-f	MJ	1.40E+3	6.81E+0	7.95E-1	1.40E+3	1.16E+1	1.12E+2	6.26E-1	-6.90E+2	8.38E+2
WDP	m3 depriv.	8.51E+1	2.09E-2	3.06E-2	8.51E+1	3.57E-2	4.30E+0	3.48E-3	-3.93E+1	5.01E+1
PM	disease inc.	1.96E-6	4.01E-8	5.32E-9	2.01E-6	6.84E-8	5.17E-7	4.28E-9	-7.00E-7	1.90E-6
IR	kBq U-235 eq	2.98E+0	2.98E-2	5.96E-4	3.01E+0	5.09E-2	3.91E-1	2.87E-3	-1.29E+0	2.17E+0
ETP-fw	CTUe	9.46E+2	5.53E+0	7.08E+0	9.59E+2	9.45E+0	8.16E+2	8.95E+0	-4.05E+2	1.39E+3
HTP-c	CTUh	3.78E-8	1.97E-10	3.61E-10	3.83E-8	3.36E-10	1.26E-8	1.61E-11	-1.48E-8	3.64E-8
HTP-nc	CTUh	1.15E-6	6.59E-9	9.17E-9	1.17E-6	1.13E-8	2.94E-7	1.73E-9	-5.08E-7	9.67E-7
SQP	Pt	6.41E+2	5.83E+0	1.31E+0	6.48E+2	9.96E+0	7.09E+1	1.58E+0	-1.69E+2	5.61E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.87E+2	9.77E-2	1.41E+1	2.01E+2	1.67E-1	7.95E+0	2.24E-2	-4.83E+1	1.61E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.87E+2	9.77E-2	1.41E+1	2.01E+2	1.67E-1	7.95E+0	2.24E-2	-4.83E+1	1.61E+2
PENRE	MJ	1.50E+3	7.23E+0	8.46E-1	1.51E+3	1.24E+1	1.20E+2	6.64E-1	-7.44E+2	8.94E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.50E+3	7.23E+0	8.46E-1	1.51E+3	1.24E+1	1.20E+2	6.64E-1	-7.44E+2	8.94E+2
PET	MJ	1.68E+3	7.33E+0	1.49E+1	1.71E+3	1.25E+1	1.28E+2	6.87E-1	-7.92E+2	1.06E+3
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	9.51E-1	7.71E-4	8.55E-4	9.52E-1	1.32E-3	1.20E-1	7.67E-4	-4.14E-1	6.61E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.11E-3	1.74E-5	1.60E-10	1.13E-3	2.98E-5	1.83E-4	7.53E-7	-5.84E-4	7.56E-4
NHWD	kg	5.34E+0	4.22E-1	6.18E-4	5.76E+0	7.21E-1	4.35E+0	2.92E+0	-2.14E+0	1.16E+1
RWD	kg	2.75E-3	4.63E-5	6.42E-11	2.80E-3	7.91E-5	4.23E-4	4.10E-6	-1.14E-3	2.16E-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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