

Environmental Profile

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

Ecochain v3.5.80



Product: 3017592 - PVCU Branch 87° BR 500x400 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	7.10E+1	6.19E-1	8.57E-2	7.17E+1	1.04E+0	3.85E+1	2.91E-1	-4.08E+1	7.07E+1
GWP-f	kg CO2 eq	7.70E+1	6.19E-1	8.66E-2	7.77E+1	1.04E+0	3.18E+1	2.91E-1	-4.05E+1	7.04E+1
GWP-b	kg CO2 eq	-6.08E+0	3.76E-4	-9.14E-4	-6.08E+0	6.30E-4	6.62E+0	3.73E-4	-2.62E-1	2.77E-1
GWP-luluc	kg CO2 eq	6.14E-2	2.19E-4	8.85E-5	6.17E-2	3.67E-4	1.20E-2	7.86E-6	-2.55E-2	4.85E-2
ODP	kg CFC11 eq	3.93E-5	1.43E-7	4.89E-9	3.95E-5	2.39E-7	3.20E-6	1.19E-8	-1.92E-5	2.37E-5
AP	mol H+ eq	3.49E-1	3.53E-3	8.73E-4	3.53E-1	5.91E-3	5.67E-2	2.84E-4	-1.48E-1	2.68E-1
EP-fw	kg P eq	3.25E-3	5.09E-6	4.88E-6	3.26E-3	8.54E-6	3.97E-4	3.55E-7	-1.40E-3	2.26E-3
EP-m	kg N eq	5.93E-2	1.26E-3	9.19E-5	6.07E-2	2.11E-3	1.40E-2	1.83E-4	-2.62E-2	5.08E-2
EP-T	mol N eq	6.48E-1	1.39E-2	1.10E-3	6.63E-1	2.33E-2	1.55E-1	1.14E-3	-2.84E-1	5.58E-1
POCP	kg NMVOC eq	2.29E-1	3.97E-3	3.72E-4	2.33E-1	6.66E-3	4.63E-2	3.85E-4	-9.64E-2	1.90E-1
ADP-mm	kg Sb eq	3.24E-3	1.60E-5	1.16E-5	3.27E-3	2.68E-5	2.21E-4	2.80E-7	-8.10E-4	2.71E-3
ADP-f	MJ	1.96E+3	9.50E+0	8.03E-1	1.97E+3	1.59E+1	1.55E+2	8.59E-1	-9.63E+2	1.18E+3
WDP	m3 depriv.	1.18E+2	2.92E-2	3.09E-2	1.19E+2	4.89E-2	5.94E+0	4.71E-3	-5.44E+1	7.02E+1
PM	disease inc.	2.74E-6	5.59E-8	5.38E-9	2.80E-6	9.37E-8	7.11E-7	5.88E-9	-9.67E-7	2.64E-6
IR	kBq U-235 eq	4.15E+0	4.15E-2	6.03E-4	4.19E+0	6.96E-2	5.38E-1	3.95E-3	-1.78E+0	3.02E+0
ETP-fw	CTUe	1.32E+3	7.71E+0	7.16E+0	1.33E+3	1.29E+1	1.13E+3	1.24E+1	-5.59E+2	1.93E+3
HTP-c	CTUh	5.23E-8	2.74E-10	3.65E-10	5.30E-8	4.60E-10	1.73E-8	2.21E-11	-2.05E-8	5.03E-8
HTP-nc	CTUh	1.60E-6	9.20E-9	9.27E-9	1.62E-6	1.54E-8	4.06E-7	2.39E-9	-7.02E-7	1.34E-6
SQP	Pt	8.63E+2	8.13E+0	1.33E+0	8.73E+2	1.36E+1	9.73E+1	2.18E+0	-2.27E+2	7.58E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.51E+2	1.36E-1	1.42E+1	2.65E+2	2.28E-1	1.10E+1	3.09E-2	-6.56E+1	2.11E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.51E+2	1.36E-1	1.42E+1	2.65E+2	2.28E-1	1.10E+1	3.09E-2	-6.56E+1	2.11E+2
PENRE	MJ	2.10E+3	1.01E+1	8.55E-1	2.11E+3	1.69E+1	1.64E+2	9.12E-1	-1.04E+3	1.25E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.10E+3	1.01E+1	8.55E-1	2.11E+3	1.69E+1	1.64E+2	9.12E-1	-1.04E+3	1.25E+3
PET	MJ	2.35E+3	1.02E+1	1.51E+1	2.38E+3	1.71E+1	1.75E+2	9.43E-1	-1.10E+3	1.47E+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	1.33E+0	1.07E-3	8.64E-4	1.33E+0	1.80E-3	1.66E-1	1.05E-3	-5.73E-1	9.31E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.54E-3	2.43E-5	1.62E-10	1.56E-3	4.07E-5	2.52E-4	1.03E-6	-8.19E-4	1.04E-3
NHWD	kg	7.50E+0	5.89E-1	6.24E-4	8.09E+0	9.87E-1	6.01E+0	4.00E+0	-2.96E+0	1.61E+1
RWD	kg	3.82E-3	6.46E-5	6.49E-11	3.89E-3	1.08E-4	5.81E-4	5.62E-6	-1.58E-3	3.00E-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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