

Environmental Profile

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

Ecochain v3.5.80



Product: 3017589 - PVCU Branch 87° BR 500x250 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	4.99E+1	4.37E-1	8.48E-2	5.04E+1	7.67E-1	2.83E+1	2.11E-1	-2.90E+1	5.07E+1
GWP-f	kg CO2 eq	5.50E+1	4.37E-1	8.57E-2	5.56E+1	7.66E-1	2.27E+1	2.11E-1	-2.88E+1	5.04E+1
GWP-b	kg CO2 eq	-5.17E+0	2.65E-4	-9.04E-4	-5.17E+0	4.65E-4	5.57E+0	2.70E-4	-1.88E-1	2.14E-1
GWP-luluc	kg CO2 eq	4.42E-2	1.55E-4	8.75E-5	4.44E-2	2.71E-4	8.69E-3	5.77E-6	-1.84E-2	3.50E-2
ODP	kg CFC11 eq	2.82E-5	1.01E-7	4.84E-9	2.84E-5	1.77E-7	2.30E-6	8.73E-9	-1.38E-5	1.71E-5
AP	mol H+ eq	2.51E-1	2.49E-3	8.64E-4	2.54E-1	4.37E-3	4.12E-2	2.08E-4	-1.07E-1	1.93E-1
EP-fw	kg P eq	2.32E-3	3.59E-6	4.83E-6	2.33E-3	6.31E-6	2.88E-4	2.59E-7	-1.01E-3	1.62E-3
EP-m	kg N eq	4.26E-2	8.90E-4	9.09E-5	4.36E-2	1.56E-3	1.02E-2	1.34E-4	-1.89E-2	3.66E-2
EP-T	mol N eq	4.66E-1	9.81E-3	1.09E-3	4.77E-1	1.72E-2	1.13E-1	8.33E-4	-2.05E-1	4.03E-1
POCP	kg NMVOC eq	1.65E-1	2.80E-3	3.68E-4	1.68E-1	4.92E-3	3.38E-2	2.82E-4	-6.93E-2	1.37E-1
ADP-mm	kg Sb eq	2.44E-3	1.13E-5	1.15E-5	2.46E-3	1.98E-5	1.61E-4	2.06E-7	-5.86E-4	2.06E-3
ADP-f	MJ	1.40E+3	6.70E+0	7.95E-1	1.41E+3	1.18E+1	1.13E+2	6.31E-1	-6.87E+2	8.44E+2
WDP	m3 depriv.	8.46E+1	2.06E-2	3.06E-2	8.46E+1	3.61E-2	4.29E+0	3.55E-3	-3.91E+1	4.99E+1
PM	disease inc.	2.01E-6	3.94E-8	5.32E-9	2.05E-6	6.92E-8	5.20E-7	4.31E-9	-7.01E-7	1.95E-6
IR	kBq U-235 eq	2.99E+0	2.93E-2	5.96E-4	3.02E+0	5.14E-2	3.92E-1	2.89E-3	-1.28E+0	2.19E+0
ETP-fw	CTUe	9.55E+2	5.44E+0	7.08E+0	9.67E+2	9.55E+0	8.10E+2	8.87E+0	-4.06E+2	1.39E+3
HTP-c	CTUh	3.83E-8	1.94E-10	3.61E-10	3.88E-8	3.40E-10	1.27E-8	1.62E-11	-1.48E-8	3.71E-8
HTP-nc	CTUh	1.16E-6	6.49E-9	9.17E-9	1.17E-6	1.14E-8	2.93E-7	1.72E-9	-5.06E-7	9.71E-7
SQP	Pt	6.93E+2	5.73E+0	1.31E+0	7.00E+2	1.01E+1	7.14E+1	1.59E+0	-1.79E+2	6.04E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.00E+2	9.61E-2	1.41E+1	2.14E+2	1.69E-1	7.94E+0	2.24E-2	-5.03E+1	1.72E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.00E+2	9.61E-2	1.41E+1	2.14E+2	1.69E-1	7.94E+0	2.24E-2	-5.03E+1	1.72E+2
PENRE	MJ	1.50E+3	7.11E+0	8.46E-1	1.51E+3	1.25E+1	1.20E+2	6.69E-1	-7.41E+2	9.00E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.50E+3	7.11E+0	8.46E-1	1.51E+3	1.25E+1	1.20E+2	6.69E-1	-7.41E+2	9.00E+2
PET	MJ	1.70E+3	7.21E+0	1.49E+1	1.72E+3	1.27E+1	1.28E+2	6.92E-1	-7.91E+2	1.07E+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	9.52E-1	7.58E-4	8.55E-4	9.53E-1	1.33E-3	1.20E-1	7.72E-4	-4.12E-1	6.64E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.11E-3	1.71E-5	1.60E-10	1.13E-3	3.01E-5	1.84E-4	7.58E-7	-5.83E-4	7.62E-4
NHWD	kg	5.38E+0	4.15E-1	6.18E-4	5.80E+0	7.29E-1	4.40E+0	2.96E+0	-2.13E+0	1.18E+1
RWD	kg	2.78E-3	4.56E-5	6.42E-11	2.82E-3	8.00E-5	4.24E-4	4.13E-6	-1.14E-3	2.19E-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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