

Environmental Profile

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

Ecochain v3.5.80



Product: 3017579 - PVCU Branch 87° BR 400x200 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	3.06E+1	2.64E-1	6.66E-2	3.09E+1	4.73E-1	1.71E+1	1.31E-1	-1.79E+1	3.07E+1
GWP-f	kg CO2 eq	3.38E+1	2.64E-1	6.72E-2	3.41E+1	4.72E-1	1.36E+1	1.31E-1	-1.78E+1	3.05E+1
GWP-b	kg CO2 eq	-3.21E+0	1.60E-4	-7.10E-4	-3.21E+0	2.87E-4	3.48E+0	1.68E-4	-1.18E-1	1.44E-1
GWP-luluc	kg CO2 eq	2.71E-2	9.33E-5	6.87E-5	2.73E-2	1.67E-4	5.41E-3	3.57E-6	-1.15E-2	2.13E-2
ODP	kg CFC11 eq	1.76E-5	6.07E-8	3.80E-9	1.77E-5	1.09E-7	1.44E-6	5.38E-9	-8.60E-6	1.06E-5
AP	mol H+ eq	1.53E-1	1.50E-3	6.78E-4	1.56E-1	2.69E-3	2.56E-2	1.28E-4	-6.65E-2	1.18E-1
EP-fw	kg P eq	1.43E-3	2.17E-6	3.79E-6	1.44E-3	3.89E-6	1.79E-4	1.61E-7	-6.33E-4	9.90E-4
EP-m	kg N eq	2.61E-2	5.37E-4	7.14E-5	2.67E-2	9.63E-4	6.33E-3	8.17E-5	-1.18E-2	2.23E-2
EP-T	mol N eq	2.85E-1	5.92E-3	8.53E-4	2.92E-1	1.06E-2	6.98E-2	5.14E-4	-1.28E-1	2.45E-1
POCP	kg NMVOC eq	1.00E-1	1.69E-3	2.89E-4	1.02E-1	3.03E-3	2.09E-2	1.74E-4	-4.31E-2	8.31E-2
ADP-mm	kg Sb eq	1.37E-3	6.82E-6	9.05E-6	1.38E-3	1.22E-5	9.98E-5	1.27E-7	-3.62E-4	1.13E-3
ADP-f	MJ	8.58E+2	4.05E+0	6.24E-1	8.63E+2	7.25E+0	7.00E+1	3.89E-1	-4.26E+2	5.15E+2
WDP	m3 depriv.	5.26E+1	1.24E-2	2.40E-2	5.26E+1	2.23E-2	2.67E+0	2.21E-3	-2.45E+1	3.08E+1
PM	disease inc.	1.22E-6	2.38E-8	4.18E-9	1.25E-6	4.27E-8	3.22E-7	2.66E-9	-4.38E-7	1.18E-6
IR	kBq U-235 eq	1.84E+0	1.77E-2	4.68E-4	1.86E+0	3.17E-2	2.43E-1	1.78E-3	-8.00E-1	1.34E+0
ETP-fw	CTUe	5.84E+2	3.29E+0	5.56E+0	5.93E+2	5.89E+0	5.07E+2	5.55E+0	-2.53E+2	8.58E+2
HTP-c	CTUh	2.35E-8	1.17E-10	2.84E-10	2.39E-8	2.10E-10	7.86E-9	1.00E-11	-9.23E-9	2.27E-8
HTP-nc	CTUh	7.14E-7	3.92E-9	7.20E-9	7.25E-7	7.02E-9	1.83E-7	1.07E-9	-3.17E-7	5.99E-7
SQP	Pt	4.29E+2	3.46E+0	1.03E+0	4.34E+2	6.21E+0	4.42E+1	9.84E-1	-1.12E+2	3.73E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.21E+2	5.80E-2	1.11E+1	1.32E+2	1.04E-1	4.94E+0	1.39E-2	-3.15E+1	1.06E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.21E+2	5.80E-2	1.11E+1	1.32E+2	1.04E-1	4.94E+0	1.39E-2	-3.15E+1	1.06E+2
PENRE	MJ	9.21E+2	4.30E+0	6.64E-1	9.26E+2	7.70E+0	7.45E+1	4.13E-1	-4.59E+2	5.49E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.21E+2	4.30E+0	6.64E-1	9.26E+2	7.70E+0	7.45E+1	4.13E-1	-4.59E+2	5.49E+2
PET	MJ	1.04E+3	4.35E+0	1.17E+1	1.06E+3	7.80E+0	7.94E+1	4.27E-1	-4.91E+2	6.55E+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	5.85E-1	4.58E-4	6.71E-4	5.86E-1	8.21E-4	7.47E-2	4.76E-4	-2.57E-1	4.04E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.91E-4	1.03E-5	1.26E-10	7.01E-4	1.85E-5	1.14E-4	4.68E-7	-3.60E-4	4.74E-4
NHWD	kg	3.30E+0	2.51E-1	4.85E-4	3.55E+0	4.50E-1	2.71E+0	1.82E+0	-1.33E+0	7.19E+0
RWD	kg	1.70E-3	2.75E-5	5.04E-11	1.73E-3	4.93E-5	2.63E-4	2.54E-6	-7.10E-4	1.33E-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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