

Environmental Profile

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

Ecochain v3.5.80



Product: 3017585 - PVCU Branch 45° BR 500x160 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	4.93E+1	4.29E-1	1.06E-1	4.98E+1	7.52E-1	2.72E+1	2.07E-1	-2.85E+1	4.94E+1
GWP-f	kg CO2 eq	5.39E+1	4.28E-1	1.07E-1	5.44E+1	7.51E-1	2.21E+1	2.07E-1	-2.83E+1	4.92E+1
GWP-b	kg CO2 eq	-4.64E+0	2.60E-4	-1.13E-3	-4.64E+0	4.56E-4	5.04E+0	2.65E-4	-1.85E-1	2.13E-1
GWP-luluc	kg CO2 eq	4.30E-2	1.52E-4	1.10E-4	4.33E-2	2.66E-4	8.54E-3	5.65E-6	-1.81E-2	3.41E-2
ODP	kg CFC11 eq	2.78E-5	9.87E-8	6.06E-9	2.79E-5	1.73E-7	2.27E-6	8.54E-9	-1.36E-5	1.68E-5
AP	mol H+ eq	2.45E-1	2.44E-3	1.08E-3	2.48E-1	4.28E-3	4.05E-2	2.04E-4	-1.05E-1	1.89E-1
EP-fw	kg P eq	2.28E-3	3.52E-6	6.04E-6	2.29E-3	6.18E-6	2.83E-4	2.54E-7	-9.95E-4	1.58E-3
EP-m	kg N eq	4.16E-2	8.73E-4	1.14E-4	4.26E-2	1.53E-3	1.00E-2	1.30E-4	-1.85E-2	3.57E-2
EP-T	mol N eq	4.54E-1	9.62E-3	1.36E-3	4.65E-1	1.69E-2	1.11E-1	8.15E-4	-2.01E-1	3.92E-1
POCP	kg NMVOC eq	1.60E-1	2.75E-3	4.61E-4	1.64E-1	4.82E-3	3.31E-2	2.76E-4	-6.80E-2	1.34E-1
ADP-mm	kg Sb eq	2.28E-3	1.11E-5	1.44E-5	2.31E-3	1.94E-5	1.58E-4	2.01E-7	-5.73E-4	1.91E-3
ADP-f	MJ	1.37E+3	6.57E+0	9.96E-1	1.38E+3	1.15E+1	1.11E+2	6.18E-1	-6.75E+2	8.24E+2
WDP	m3 depriv.	8.32E+1	2.02E-2	3.83E-2	8.32E+1	3.54E-2	4.22E+0	3.47E-3	-3.85E+1	4.90E+1
PM	disease inc.	1.94E-6	3.86E-8	6.67E-9	1.98E-6	6.78E-8	5.11E-7	4.22E-9	-6.87E-7	1.88E-6
IR	kBq U-235 eq	2.92E+0	2.87E-2	7.47E-4	2.95E+0	5.04E-2	3.85E-1	2.83E-3	-1.26E+0	2.13E+0
ETP-fw	CTUe	9.31E+2	5.34E+0	8.87E+0	9.46E+2	9.36E+0	7.98E+2	8.74E+0	-3.97E+2	1.36E+3
HTP-c	CTUh	3.73E-8	1.90E-10	4.53E-10	3.79E-8	3.33E-10	1.24E-8	1.58E-11	-1.45E-8	3.62E-8
HTP-nc	CTUh	1.13E-6	6.36E-9	1.15E-8	1.15E-6	1.12E-8	2.88E-7	1.69E-9	-4.97E-7	9.54E-7
SQP	Pt	6.40E+2	5.62E+0	1.64E+0	6.47E+2	9.87E+0	7.01E+1	1.56E+0	-1.68E+2	5.61E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.89E+2	9.43E-2	1.76E+1	2.07E+2	1.65E-1	7.81E+0	2.20E-2	-4.78E+1	1.67E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.89E+2	9.43E-2	1.76E+1	2.07E+2	1.65E-1	7.81E+0	2.20E-2	-4.78E+1	1.67E+2
PENRE	MJ	1.47E+3	6.98E+0	1.06E+0	1.48E+3	1.22E+1	1.18E+2	6.55E-1	-7.28E+2	8.79E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.47E+3	6.98E+0	1.06E+0	1.48E+3	1.22E+1	1.18E+2	6.55E-1	-7.28E+2	8.79E+2
PET	MJ	1.66E+3	7.07E+0	1.87E+1	1.68E+3	1.24E+1	1.26E+2	6.77E-1	-7.76E+2	1.05E+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	9.32E-1	7.44E-4	1.07E-3	9.34E-1	1.31E-3	1.18E-1	7.56E-4	-4.05E-1	6.49E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.09E-3	1.68E-5	2.00E-10	1.10E-3	2.95E-5	1.80E-4	7.43E-7	-5.72E-4	7.43E-4
NHWD	kg	5.25E+0	4.07E-1	7.74E-4	5.66E+0	7.15E-1	4.31E+0	2.90E+0	-2.10E+0	1.15E+1
RWD	kg	2.70E-3	4.47E-5	8.05E-11	2.74E-3	7.84E-5	4.17E-4	4.04E-6	-1.12E-3	2.12E-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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