

Environmental Profile

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

Ecochain v3.5.80



Product: 3017581 - PVCU Branch 87° BR 400x250 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	2.91E+1	2.49E-1	5.47E-2	2.94E+1	4.53E-1	1.68E+1	1.25E-1	-1.71E+1	2.97E+1
GWP-f	kg CO2 eq	3.24E+1	2.49E-1	5.52E-2	3.27E+1	4.52E-1	1.33E+1	1.25E-1	-1.70E+1	2.96E+1
GWP-b	kg CO2 eq	-3.30E+0	1.51E-4	-5.83E-4	-3.30E+0	2.75E-4	3.54E+0	1.60E-4	-1.11E-1	1.30E-1
GWP-luluc	kg CO2 eq	2.61E-2	8.80E-5	5.65E-5	2.62E-2	1.60E-4	5.13E-3	3.42E-6	-1.09E-2	2.06E-2
ODP	kg CFC11 eq	1.67E-5	5.73E-8	3.12E-9	1.68E-5	1.04E-7	1.36E-6	5.15E-9	-8.14E-6	1.01E-5
AP	mol H+ eq	1.48E-1	1.42E-3	5.57E-4	1.50E-1	2.58E-3	2.43E-2	1.23E-4	-6.30E-2	1.14E-1
EP-fw	kg P eq	1.37E-3	2.05E-6	3.11E-6	1.37E-3	3.72E-6	1.70E-4	1.54E-7	-5.98E-4	9.50E-4
EP-m	kg N eq	2.51E-2	5.07E-4	5.86E-5	2.57E-2	9.22E-4	6.04E-3	7.91E-5	-1.12E-2	2.15E-2
EP-T	mol N eq	2.75E-1	5.58E-3	7.01E-4	2.81E-1	1.02E-2	6.66E-2	4.92E-4	-1.22E-1	2.37E-1
POCP	kg NMVOC eq	9.69E-2	1.60E-3	2.37E-4	9.88E-2	2.90E-3	1.99E-2	1.67E-4	-4.10E-2	8.08E-2
ADP-mm	kg Sb eq	1.44E-3	6.43E-6	7.43E-6	1.46E-3	1.17E-5	9.48E-5	1.22E-7	-3.47E-4	1.22E-3
ADP-f	MJ	8.23E+2	3.82E+0	5.13E-1	8.27E+2	6.94E+0	6.65E+1	3.72E-1	-4.05E+2	4.96E+2
WDP	m3 depriv.	4.98E+1	1.17E-2	1.97E-2	4.98E+1	2.13E-2	2.53E+0	2.13E-3	-2.31E+1	2.93E+1
PM	disease inc.	1.19E-6	2.24E-8	3.43E-9	1.22E-6	4.08E-8	3.07E-7	2.55E-9	-4.16E-7	1.15E-6
IR	kBq U-235 eq	1.77E+0	1.67E-2	3.85E-4	1.79E+0	3.03E-2	2.31E-1	1.71E-3	-7.57E-1	1.30E+0
ETP-fw	CTUe	5.63E+2	3.10E+0	4.57E+0	5.71E+2	5.64E+0	4.78E+2	5.23E+0	-2.41E+2	8.19E+2
HTP-c	CTUh	2.26E-8	1.10E-10	2.33E-10	2.30E-8	2.01E-10	7.51E-9	9.58E-12	-8.74E-9	2.20E-8
HTP-nc	CTUh	6.82E-7	3.69E-9	5.92E-9	6.91E-7	6.72E-9	1.73E-7	1.01E-9	-3.00E-7	5.72E-7
SQP	Pt	4.32E+2	3.27E+0	8.46E-1	4.36E+2	5.94E+0	4.21E+1	9.41E-1	-1.11E+2	3.74E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.21E+2	5.48E-2	9.08E+0	1.30E+2	9.96E-2	4.68E+0	1.32E-2	-3.07E+1	1.04E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.21E+2	5.48E-2	9.08E+0	1.30E+2	9.96E-2	4.68E+0	1.32E-2	-3.07E+1	1.04E+2
PENRE	MJ	8.82E+2	4.05E+0	5.46E-1	8.87E+2	7.37E+0	7.08E+1	3.95E-1	-4.36E+2	5.29E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.82E+2	4.05E+0	5.46E-1	8.87E+2	7.37E+0	7.08E+1	3.95E-1	-4.36E+2	5.29E+2
PET	MJ	1.00E+3	4.11E+0	9.63E+0	1.02E+3	7.47E+0	7.55E+1	4.08E-1	-4.67E+2	6.33E+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	5.59E-1	4.32E-4	5.52E-4	5.60E-1	7.86E-4	7.11E-2	4.56E-4	-2.43E-1	3.89E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.63E-4	9.76E-6	1.03E-10	6.72E-4	1.78E-5	1.08E-4	4.48E-7	-3.43E-4	4.56E-4
NHWD	kg	3.18E+0	2.37E-1	3.98E-4	3.42E+0	4.30E-1	2.59E+0	1.75E+0	-1.26E+0	6.93E+0
RWD	kg	1.65E-3	2.60E-5	4.14E-11	1.68E-3	4.72E-5	2.50E-4	2.44E-6	-6.73E-4	1.31E-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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