

Environmental Profile

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

Ecochain v3.5.80



Product: 4001061 - PVCU Branch 45° BR 315x250 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	2.72E+1	2.25E-1	7.76E-2	2.75E+1	4.11E-1	1.41E+1	1.14E-1	-1.56E+1	2.66E+1
GWP-f	kg CO2 eq	2.92E+1	2.25E-1	7.84E-2	2.95E+1	4.10E-1	1.19E+1	1.14E-1	-1.54E+1	2.65E+1
GWP-b	kg CO2 eq	-2.04E+0	1.36E-4	-8.27E-4	-2.04E+0	2.49E-4	2.27E+0	1.46E-4	-1.03E-1	1.25E-1
GWP-luluc	kg CO2 eq	2.31E-2	7.96E-5	8.01E-5	2.33E-2	1.45E-4	4.69E-3	3.11E-6	-9.92E-3	1.82E-2
ODP	kg CFC11 eq	1.53E-5	5.18E-8	4.43E-9	1.54E-5	9.46E-8	1.25E-6	4.68E-9	-7.48E-6	9.26E-6
AP	mol H+ eq	1.33E-1	1.28E-3	7.91E-4	1.35E-1	2.34E-3	2.21E-2	1.12E-4	-5.75E-2	1.02E-1
EP-fw	kg P eq	1.24E-3	1.85E-6	4.42E-6	1.24E-3	3.38E-6	1.56E-4	1.40E-7	-5.49E-4	8.55E-4
EP-m	kg N eq	2.24E-2	4.58E-4	8.32E-5	2.30E-2	8.37E-4	5.47E-3	7.14E-5	-1.01E-2	1.92E-2
EP-T	mol N eq	2.44E-1	5.05E-3	9.94E-4	2.50E-1	9.22E-3	6.03E-2	4.47E-4	-1.10E-1	2.10E-1
POCP	kg NMVOC eq	8.63E-2	1.44E-3	3.36E-4	8.81E-2	2.64E-3	1.81E-2	1.52E-4	-3.72E-2	7.17E-2
ADP-mm	kg Sb eq	1.21E-3	5.81E-6	1.05E-5	1.22E-3	1.06E-5	8.66E-5	1.11E-7	-3.16E-4	1.00E-3
ADP-f	MJ	7.45E+2	3.45E+0	7.28E-1	7.49E+2	6.30E+0	6.07E+1	3.39E-1	-3.70E+2	4.46E+2
WDP	m3 depriv.	4.56E+1	1.06E-2	2.80E-2	4.57E+1	1.93E-2	2.32E+0	1.93E-3	-2.13E+1	2.67E+1
PM	disease inc.	1.02E-6	2.03E-8	4.87E-9	1.05E-6	3.71E-8	2.79E-7	2.32E-9	-3.75E-7	9.90E-7
IR	kBq U-235 eq	1.60E+0	1.51E-2	5.46E-4	1.61E+0	2.75E-2	2.11E-1	1.55E-3	-6.95E-1	1.16E+0
ETP-fw	CTUe	5.05E+2	2.80E+0	6.48E+0	5.14E+2	5.12E+0	4.40E+2	4.83E+0	-2.17E+2	7.47E+2
HTP-c	CTUh	2.00E-8	9.97E-11	3.31E-10	2.05E-8	1.82E-10	6.78E-9	8.73E-12	-7.98E-9	1.95E-8
HTP-nc	CTUh	6.17E-7	3.34E-9	8.39E-9	6.29E-7	6.10E-9	1.58E-7	9.34E-10	-2.74E-7	5.20E-7
SQP	Pt	3.04E+2	2.95E+0	1.20E+0	3.08E+2	5.39E+0	3.83E+1	8.56E-1	-8.27E+1	2.70E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.50E+1	4.95E-2	1.29E+1	1.08E+2	9.04E-2	4.29E+0	1.21E-2	-2.44E+1	8.79E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.50E+1	4.95E-2	1.29E+1	1.08E+2	9.04E-2	4.29E+0	1.21E-2	-2.44E+1	8.79E+1
PENRE	MJ	7.99E+2	3.66E+0	7.74E-1	8.03E+2	6.69E+0	6.46E+1	3.59E-1	-3.99E+2	4.76E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.99E+2	3.66E+0	7.74E-1	8.03E+2	6.69E+0	6.46E+1	3.59E-1	-3.99E+2	4.76E+2
PET	MJ	8.94E+2	3.71E+0	1.37E+1	9.11E+2	6.78E+0	6.89E+1	3.71E-1	-4.23E+2	5.64E+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	5.07E-1	3.90E-4	7.83E-4	5.08E-1	7.13E-4	6.49E-2	4.15E-4	-2.24E-1	3.50E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.95E-4	8.82E-6	1.46E-10	6.04E-4	1.61E-5	9.86E-5	4.08E-7	-3.12E-4	4.06E-4
NHWD	kg	2.81E+0	2.14E-1	5.65E-4	3.03E+0	3.91E-1	2.34E+0	1.58E+0	-1.15E+0	6.18E+0
RWD	kg	1.48E-3	2.35E-5	5.88E-11	1.50E-3	4.29E-5	2.28E-4	2.21E-6	-6.17E-4	1.16E-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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