

Environmental Profile

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

Ecochain v3.5.80



Product: 3017578 - PVCU Branch 87° BR 400x160 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	2.49E+1	2.16E-1	1.21E-1	2.52E+1	3.86E-1	1.43E+1	1.07E-1	-1.46E+1	2.54E+1
GWP-f	kg CO2 eq	2.77E+1	2.16E-1	1.22E-1	2.80E+1	3.86E-1	1.13E+1	1.07E-1	-1.45E+1	2.52E+1
GWP-b	kg CO2 eq	-2.78E+0	1.31E-4	-1.29E-3	-2.78E+0	2.34E-4	2.99E+0	1.37E-4	-9.56E-2	1.14E-1
GWP-luluc	kg CO2 eq	2.24E-2	7.64E-5	1.25E-4	2.26E-2	1.37E-4	4.39E-3	2.93E-6	-9.37E-3	1.78E-2
ODP	kg CFC11 eq	1.43E-5	4.98E-8	6.92E-9	1.44E-5	8.89E-8	1.16E-6	4.40E-9	-6.98E-6	8.63E-6
AP	mol H+ eq	1.27E-1	1.23E-3	1.23E-3	1.29E-1	2.20E-3	2.08E-2	1.05E-4	-5.41E-2	9.80E-2
EP-fw	kg P eq	1.17E-3	1.78E-6	6.90E-6	1.18E-3	3.17E-6	1.45E-4	1.32E-7	-5.13E-4	8.18E-4
EP-m	kg N eq	2.15E-2	4.40E-4	1.30E-4	2.21E-2	7.86E-4	5.16E-3	6.72E-5	-9.59E-3	1.85E-2
EP-T	mol N eq	2.36E-1	4.85E-3	1.55E-3	2.42E-1	8.67E-3	5.69E-2	4.20E-4	-1.04E-1	2.04E-1
POCP	kg NMVOC eq	8.28E-2	1.39E-3	5.25E-4	8.47E-2	2.48E-3	1.70E-2	1.42E-4	-3.51E-2	6.92E-2
ADP-mm	kg Sb eq	2.20E-3	5.59E-6	1.65E-5	2.23E-3	9.98E-6	8.11E-5	1.04E-7	-2.96E-4	2.02E-3
ADP-f	MJ	7.02E+2	3.32E+0	1.14E+0	7.07E+2	5.92E+0	5.69E+1	3.18E-1	-3.47E+2	4.23E+2
WDP	m3 depriv.	4.27E+1	1.02E-2	4.37E-2	4.27E+1	1.82E-2	2.17E+0	1.85E-3	-1.98E+1	2.51E+1
PM	disease inc.	1.02E-6	1.95E-8	7.60E-9	1.04E-6	3.48E-8	2.62E-7	2.17E-9	-3.57E-7	9.85E-7
IR	kBq U-235 eq	1.51E+0	1.45E-2	8.52E-4	1.53E+0	2.59E-2	1.98E-1	1.46E-3	-6.49E-1	1.11E+0
ETP-fw	CTUe	4.91E+2	2.69E+0	1.01E+1	5.04E+2	4.81E+0	4.09E+2	4.48E+0	-2.06E+2	7.16E+2
HTP-c	CTUh	1.96E-8	9.58E-11	5.16E-10	2.02E-8	1.71E-10	6.44E-9	8.21E-12	-7.50E-9	1.93E-8
HTP-nc	CTUh	5.91E-7	3.21E-9	1.31E-8	6.07E-7	5.73E-9	1.48E-7	8.69E-10	-2.57E-7	5.05E-7
SQP	Pt	3.66E+2	2.84E+0	1.88E+0	3.71E+2	5.07E+0	3.60E+1	8.03E-1	-9.40E+1	3.18E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.05E+2	4.76E-2	2.01E+1	1.25E+2	8.50E-2	4.01E+0	1.13E-2	-2.62E+1	1.03E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.05E+2	4.76E-2	2.01E+1	1.25E+2	8.50E-2	4.01E+0	1.13E-2	-2.62E+1	1.03E+2
PENRE	MJ	7.53E+2	3.52E+0	1.21E+0	7.58E+2	6.29E+0	6.05E+1	3.37E-1	-3.74E+2	4.51E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.53E+2	3.52E+0	1.21E+0	7.58E+2	6.29E+0	6.05E+1	3.37E-1	-3.74E+2	4.51E+2
PET	MJ	8.58E+2	3.57E+0	2.13E+1	8.83E+2	6.37E+0	6.45E+1	3.49E-1	-4.00E+2	5.54E+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	4.79E-1	3.75E-4	1.22E-3	4.80E-1	6.70E-4	6.07E-2	3.89E-4	-2.09E-1	3.33E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.95E-4	8.48E-6	2.29E-10	7.04E-4	1.51E-5	9.26E-5	3.83E-7	-2.94E-4	5.18E-4
NHWD	kg	2.72E+0	2.06E-1	8.83E-4	2.93E+0	3.67E-1	2.21E+0	1.49E+0	-1.08E+0	5.91E+0
RWD	kg	1.41E-3	2.25E-5	9.18E-11	1.43E-3	4.03E-5	2.14E-4	2.08E-6	-5.77E-4	1.11E-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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