

Environmental Profile

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

Ecochain v3.5.80



Product: 3017577 - PVCU Branch 45° 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	2.85E+1	2.41E-1	3.05E-1	2.91E+1	4.41E-1	1.56E+1	1.22E-1	-1.66E+1	2.87E+1
GWP-f	kg CO2 eq	3.13E+1	2.41E-1	3.08E-1	3.18E+1	4.40E-1	1.26E+1	1.22E-1	-1.65E+1	2.85E+1
GWP-b	kg CO2 eq	-2.74E+0	1.47E-4	-3.25E-3	-2.74E+0	2.67E-4	2.99E+0	1.56E-4	-1.09E-1	1.33E-1
GWP-luluc	kg CO2 eq	2.50E-2	8.54E-5	3.15E-4	2.54E-2	1.56E-4	5.02E-3	3.33E-6	-1.07E-2	1.99E-2
ODP	kg CFC11 eq	1.63E-5	5.56E-8	1.74E-8	1.64E-5	1.01E-7	1.33E-6	5.01E-9	-7.98E-6	9.88E-6
AP	mol H+ eq	1.42E-1	1.37E-3	3.11E-3	1.47E-1	2.51E-3	2.37E-2	1.19E-4	-6.16E-2	1.11E-1
EP-fw	kg P eq	1.33E-3	1.99E-6	1.74E-5	1.35E-3	3.62E-6	1.66E-4	1.50E-7	-5.87E-4	9.29E-4
EP-m	kg N eq	2.41E-2	4.92E-4	3.27E-4	2.49E-2	8.98E-4	5.87E-3	7.61E-5	-1.09E-2	2.09E-2
EP-T	mol N eq	2.63E-1	5.42E-3	3.91E-3	2.73E-1	9.89E-3	6.47E-2	4.78E-4	-1.18E-1	2.30E-1
POCP	kg NMVOC eq	9.26E-2	1.55E-3	1.32E-3	9.55E-2	2.83E-3	1.94E-2	1.62E-4	-3.99E-2	7.80E-2
ADP-mm	kg Sb eq	1.29E-3	6.24E-6	4.15E-5	1.34E-3	1.14E-5	9.28E-5	1.18E-7	-3.37E-4	1.10E-3
ADP-f	MJ	7.95E+2	3.70E+0	2.86E+0	8.01E+2	6.76E+0	6.51E+1	3.62E-1	-3.95E+2	4.79E+2
WDP	m3 depriv.	4.87E+1	1.14E-2	1.10E-1	4.88E+1	2.07E-2	2.48E+0	2.07E-3	-2.27E+1	2.86E+1
PM	disease inc.	1.12E-6	2.18E-8	1.91E-8	1.16E-6	3.98E-8	3.00E-7	2.48E-9	-4.04E-7	1.10E-6
IR	kBq U-235 eq	1.71E+0	1.62E-2	2.15E-3	1.72E+0	2.96E-2	2.26E-1	1.66E-3	-7.42E-1	1.24E+0
ETP-fw	CTUe	5.42E+2	3.01E+0	2.55E+1	5.70E+2	5.49E+0	4.70E+2	5.15E+0	-2.34E+2	8.16E+2
HTP-c	CTUh	2.18E-8	1.07E-10	1.30E-9	2.32E-8	1.95E-10	7.30E-9	9.33E-12	-8.54E-9	2.21E-8
HTP-nc	CTUh	6.62E-7	3.59E-9	3.30E-8	6.99E-7	6.54E-9	1.69E-7	9.96E-10	-2.93E-7	5.82E-7
SQP	Pt	3.77E+2	3.17E+0	4.72E+0	3.85E+2	5.78E+0	4.11E+1	9.16E-1	-9.91E+1	3.33E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.10E+2	5.31E-2	5.07E+1	1.61E+2	9.70E-2	4.59E+0	1.29E-2	-2.83E+1	1.37E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.10E+2	5.31E-2	5.07E+1	1.61E+2	9.70E-2	4.59E+0	1.29E-2	-2.83E+1	1.37E+2
PENRE	MJ	8.53E+2	3.93E+0	3.04E+0	8.60E+2	7.18E+0	6.92E+1	3.84E-1	-4.25E+2	5.11E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.53E+2	3.93E+0	3.04E+0	8.60E+2	7.18E+0	6.92E+1	3.84E-1	-4.25E+2	5.11E+2
PET	MJ	9.63E+2	3.99E+0	5.37E+1	1.02E+3	7.27E+0	7.38E+1	3.97E-1	-4.54E+2	6.48E+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	5.41E-1	4.19E-4	3.08E-3	5.45E-1	7.65E-4	6.93E-2	4.43E-4	-2.39E-1	3.77E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.41E-4	9.47E-6	5.76E-10	6.50E-4	1.73E-5	1.06E-4	4.36E-7	-3.33E-4	4.41E-4
NHWD	kg	3.05E+0	2.30E-1	2.22E-3	3.29E+0	4.19E-1	2.51E+0	1.70E+0	-1.24E+0	6.68E+0
RWD	kg	1.58E-3	2.52E-5	2.31E-10	1.60E-3	4.60E-5	2.45E-4	2.37E-6	-6.59E-4	1.24E-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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