

Environmental Profile

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

Ecochain v3.5.80



Product: 3017590 - PVCU Branch 45° BR 500x315 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	7.24E+1	6.24E-1	1.10E-1	7.31E+1	1.09E+0	4.00E+1	3.00E-1	-4.19E+1	7.26E+1
GWP-f	kg CO2 eq	7.92E+1	6.23E-1	1.11E-1	7.99E+1	1.09E+0	3.26E+1	3.00E-1	-4.16E+1	7.23E+1
GWP-b	kg CO2 eq	-6.87E+0	3.78E-4	-1.17E-3	-6.87E+0	6.63E-4	7.44E+0	3.85E-4	-2.71E-1	2.97E-1
GWP-luluc	kg CO2 eq	6.33E-2	2.21E-4	1.13E-4	6.37E-2	3.86E-4	1.25E-2	8.18E-6	-2.64E-2	5.01E-2
ODP	kg CFC11 eq	4.05E-5	1.44E-7	6.25E-9	4.06E-5	2.52E-7	3.31E-6	1.24E-8	-1.98E-5	2.44E-5
AP	mol H+ eq	3.59E-1	3.55E-3	1.12E-3	3.64E-1	6.22E-3	5.91E-2	2.95E-4	-1.53E-1	2.77E-1
EP-fw	kg P eq	3.34E-3	5.13E-6	6.23E-6	3.35E-3	8.98E-6	4.13E-4	3.68E-7	-1.45E-3	2.33E-3
EP-m	kg N eq	6.11E-2	1.27E-3	1.17E-4	6.25E-2	2.22E-3	1.47E-2	1.88E-4	-2.71E-2	5.24E-2
EP-T	mol N eq	6.68E-1	1.40E-2	1.40E-3	6.83E-1	2.45E-2	1.62E-1	1.18E-3	-2.94E-1	5.76E-1
POCP	kg NMVOC eq	2.36E-1	4.00E-3	4.75E-4	2.40E-1	7.01E-3	4.84E-2	4.01E-4	-9.96E-2	1.96E-1
ADP-mm	kg Sb eq	3.17E-3	1.61E-5	1.49E-5	3.21E-3	2.82E-5	2.30E-4	2.92E-7	-8.31E-4	2.63E-3
ADP-f	MJ	2.01E+3	9.56E+0	1.03E+0	2.02E+3	1.68E+1	1.62E+2	8.96E-1	-9.91E+2	1.21E+3
WDP	m3 depriv.	1.22E+2	2.94E-2	3.95E-2	1.22E+2	5.14E-2	6.16E+0	4.99E-3	-5.62E+1	7.21E+1
PM	disease inc.	2.83E-6	5.62E-8	6.87E-9	2.90E-6	9.85E-8	7.45E-7	6.13E-9	-1.00E-6	2.74E-6
IR	kBq U-235 eq	4.24E+0	4.18E-2	7.70E-4	4.28E+0	7.32E-2	5.62E-1	4.11E-3	-1.84E+0	3.08E+0
ETP-fw	CTUe	1.36E+3	7.77E+0	9.15E+0	1.38E+3	1.36E+1	1.17E+3	1.28E+1	-5.80E+2	1.99E+3
HTP-c	CTUh	5.46E-8	2.76E-10	4.67E-10	5.53E-8	4.84E-10	1.82E-8	2.30E-11	-2.12E-8	5.28E-8
HTP-nc	CTUh	1.66E-6	9.26E-9	1.18E-8	1.68E-6	1.62E-8	4.22E-7	2.47E-9	-7.26E-7	1.39E-6
SQP	Pt	9.44E+2	8.18E+0	1.70E+0	9.54E+2	1.43E+1	1.02E+2	2.26E+0	-2.47E+2	8.26E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.77E+2	1.37E-1	1.82E+1	2.95E+2	2.40E-1	1.14E+1	3.19E-2	-7.01E+1	2.37E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.77E+2	1.37E-1	1.82E+1	2.95E+2	2.40E-1	1.14E+1	3.19E-2	-7.01E+1	2.37E+2
PENRE	MJ	2.16E+3	1.02E+1	1.09E+0	2.17E+3	1.78E+1	1.72E+2	9.51E-1	-1.07E+3	1.29E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.16E+3	1.02E+1	1.09E+0	2.17E+3	1.78E+1	1.72E+2	9.51E-1	-1.07E+3	1.29E+3
PET	MJ	2.43E+3	1.03E+1	1.93E+1	2.46E+3	1.80E+1	1.83E+2	9.83E-1	-1.14E+3	1.53E+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	1.37E+0	1.08E-3	1.10E-3	1.37E+0	1.90E-3	1.72E-1	1.10E-3	-5.92E-1	9.56E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.59E-3	2.45E-5	2.07E-10	1.61E-3	4.29E-5	2.63E-4	1.08E-6	-8.42E-4	1.08E-3
NHWD	kg	7.72E+0	5.93E-1	7.98E-4	8.31E+0	1.04E+0	6.31E+0	4.20E+0	-3.06E+0	1.68E+1
RWD	kg	3.89E-3	6.50E-5	8.30E-11	3.96E-3	1.14E-4	6.08E-4	5.86E-6	-1.63E-3	3.05E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777