

Environmental Profile

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

Ecochain v3.5.80



Product: 4001080 - PVCU Reducer 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	9.31E+0	8.07E-2	3.54E-1	9.74E+0	1.41E-1	4.93E+0	3.94E-2	-5.34E+0	9.52E+0
GWP-f	kg CO2 eq	1.01E+1	8.06E-2	3.57E-1	1.05E+1	1.41E-1	4.07E+0	3.94E-2	-5.30E+0	9.47E+0
GWP-b	kg CO2 eq	-7.81E-1	4.89E-5	-3.77E-3	-7.85E-1	8.58E-5	8.61E-1	5.05E-5	-3.52E-2	4.07E-2
GWP-luluc	kg CO2 eq	8.03E-3	2.85E-5	3.65E-4	8.42E-3	5.00E-5	1.62E-3	1.06E-6	-3.42E-3	6.67E-3
ODP	kg CFC11 eq	5.29E-6	1.86E-8	2.02E-8	5.33E-6	3.26E-8	4.31E-7	1.61E-9	-2.57E-6	3.22E-6
AP	mol H+ eq	4.57E-2	4.59E-4	3.60E-3	4.98E-2	8.05E-4	7.64E-3	3.85E-5	-1.98E-2	3.85E-2
EP-fw	kg P eq	4.28E-4	6.63E-7	2.01E-5	4.49E-4	1.16E-6	5.37E-5	4.80E-8	-1.89E-4	3.15E-4
EP-m	kg N eq	7.74E-3	1.64E-4	3.79E-4	8.29E-3	2.88E-4	1.88E-3	2.49E-5	-3.49E-3	6.99E-3
EP-T	mol N eq	8.43E-2	1.81E-3	4.53E-3	9.06E-2	3.17E-3	2.08E-2	1.54E-4	-3.78E-2	7.69E-2
POCP	kg NMVOC eq	2.97E-2	5.18E-4	1.53E-3	3.17E-2	9.07E-4	6.23E-3	5.23E-5	-1.28E-2	2.61E-2
ADP-mm	kg Sb eq	4.40E-4	2.09E-6	4.81E-5	4.90E-4	3.65E-6	2.98E-5	3.80E-8	-1.09E-4	4.14E-4
ADP-f	MJ	2.56E+2	1.24E+0	3.31E+0	2.60E+2	2.17E+0	2.09E+1	1.17E-1	-1.27E+2	1.57E+2
WDP	m3 depriv.	1.58E+1	3.80E-3	1.27E-1	1.59E+1	6.65E-3	8.03E-1	6.34E-4	-7.31E+0	9.39E+0
PM	disease inc.	3.57E-7	7.28E-9	2.22E-8	3.87E-7	1.28E-8	9.60E-8	7.99E-10	-1.30E-7	3.67E-7
IR	kBq U-235 eq	5.50E-1	5.41E-3	2.49E-3	5.58E-1	9.48E-3	7.27E-2	5.36E-4	-2.39E-1	4.02E-1
ETP-fw	CTUe	1.74E+2	1.00E+0	2.95E+1	2.05E+2	1.76E+0	1.52E+2	1.67E+0	-7.50E+1	2.85E+2
HTP-c	CTUh	6.95E-9	3.58E-11	1.51E-9	8.49E-9	6.27E-11	2.31E-9	2.99E-12	-2.75E-9	8.12E-9
HTP-nc	CTUh	2.13E-7	1.20E-9	3.82E-8	2.53E-7	2.10E-9	5.46E-8	3.23E-10	-9.43E-8	2.16E-7
SQP	Pt	1.12E+2	1.06E+0	5.47E+0	1.18E+2	1.85E+0	1.32E+1	2.95E-1	-3.00E+1	1.04E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.37E+1	1.78E-2	5.87E+1	9.24E+1	3.11E-2	1.48E+0	4.19E-3	-8.71E+0	8.52E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.37E+1	1.78E-2	5.87E+1	9.24E+1	3.11E-2	1.48E+0	4.19E-3	-8.71E+0	8.52E+1
PENRE	MJ	2.74E+2	1.31E+0	3.53E+0	2.79E+2	2.30E+0	2.22E+1	1.24E-1	-1.37E+2	1.67E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.74E+2	1.31E+0	3.53E+0	2.79E+2	2.30E+0	2.22E+1	1.24E-1	-1.37E+2	1.67E+2
PET	MJ	3.08E+2	1.33E+0	6.22E+1	3.72E+2	2.33E+0	2.37E+1	1.28E-1	-1.46E+2	2.52E+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	1.75E-1	1.40E-4	3.57E-3	1.79E-1	2.45E-4	2.25E-2	1.43E-4	-7.69E-2	1.24E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.03E-4	3.16E-6	6.67E-10	2.07E-4	5.54E-6	3.40E-5	1.40E-7	-1.07E-4	1.39E-4
NHWD	kg	9.72E-1	7.67E-2	2.58E-3	1.05E+0	1.34E-1	8.02E-1	5.45E-1	-3.97E-1	2.14E+0
RWD	kg	5.08E-4	8.41E-6	2.68E-10	5.16E-4	1.47E-5	7.86E-5	7.64E-7	-2.12E-4	3.98E-4
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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