

Environmental Profile

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

Ecochain v3.5.80



Product: 4001031 - PVCU Double Coupler BR 500 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.83E+1	2.42E-1	2.77E-2	2.85E+1	4.03E-1	1.72E+1	1.19E-1	-1.58E+1	3.05E+1
GWP-f	kg CO2 eq	3.10E+1	2.42E-1	2.79E-2	3.13E+1	4.03E-1	1.44E+1	1.19E-1	-1.57E+1	3.04E+1
GWP-b	kg CO2 eq	-2.73E+0	1.47E-4	-2.95E-4	-2.73E+0	2.45E-4	2.89E+0	1.49E-4	-9.38E-2	6.29E-2
GWP-luluc	kg CO2 eq	2.48E-2	8.57E-5	2.85E-5	2.50E-2	1.43E-4	4.43E-3	3.15E-6	-9.42E-3	2.01E-2
ODP	kg CFC11 eq	1.50E-5	5.58E-8	1.58E-9	1.50E-5	9.28E-8	1.18E-6	4.75E-9	-7.09E-6	9.23E-6
AP	mol H+ eq	1.45E-1	1.38E-3	2.82E-4	1.46E-1	2.29E-3	2.14E-2	1.13E-4	-5.51E-2	1.15E-1
EP-fw	kg P eq	1.28E-3	1.99E-6	1.57E-6	1.28E-3	3.32E-6	1.47E-4	1.42E-7	-5.16E-4	9.20E-4
EP-m	kg N eq	2.43E-2	4.93E-4	2.96E-5	2.49E-2	8.21E-4	5.36E-3	8.35E-5	-9.89E-3	2.12E-2
EP-T	mol N eq	2.68E-1	5.44E-3	3.54E-4	2.74E-1	9.05E-3	5.91E-2	4.54E-4	-1.08E-1	2.35E-1
POCP	kg NMVOC eq	9.72E-2	1.55E-3	1.20E-4	9.88E-2	2.59E-3	1.76E-2	1.55E-4	-3.64E-2	8.28E-2
ADP-mm	kg Sb eq	2.40E-3	6.26E-6	3.76E-6	2.41E-3	1.04E-5	8.21E-5	1.12E-7	-3.34E-4	2.17E-3
ADP-f	MJ	7.91E+2	3.72E+0	2.59E-1	7.95E+2	6.18E+0	5.78E+1	3.44E-1	-3.68E+2	4.92E+2
WDP	m3 depriv.	4.48E+1	1.14E-2	9.97E-3	4.48E+1	1.90E-2	2.21E+0	1.87E-3	-1.98E+1	2.72E+1
PM	disease inc.	1.23E-6	2.19E-8	1.74E-9	1.26E-6	3.64E-8	2.67E-7	2.35E-9	-3.63E-7	1.20E-6
IR	kBq U-235 eq	1.77E+0	1.62E-2	1.94E-4	1.78E+0	2.70E-2	2.00E-1	1.58E-3	-6.61E-1	1.35E+0
ETP-fw	CTUe	5.49E+2	3.02E+0	2.31E+0	5.54E+2	5.02E+0	4.16E+2	4.55E+0	-2.08E+2	7.71E+2
HTP-c	CTUh	2.12E-8	1.07E-10	1.18E-10	2.14E-8	1.79E-10	6.46E-9	8.79E-12	-7.58E-9	2.05E-8
HTP-nc	CTUh	6.26E-7	3.60E-9	2.99E-9	6.32E-7	5.99E-9	1.51E-7	8.91E-10	-2.58E-7	5.32E-7
SQP	Pt	3.76E+2	3.18E+0	4.28E-1	3.80E+2	5.29E+0	3.65E+1	8.68E-1	-9.30E+1	3.29E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.06E+2	5.33E-2	4.59E+0	1.11E+2	8.87E-2	4.05E+0	1.25E-2	-2.59E+1	8.90E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.06E+2	5.33E-2	4.59E+0	1.11E+2	8.87E-2	4.05E+0	1.25E-2	-2.59E+1	8.90E+1
PENRE	MJ	8.48E+2	3.95E+0	2.76E-1	8.52E+2	6.57E+0	6.15E+1	3.65E-1	-3.97E+2	5.24E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.48E+2	3.95E+0	2.76E-1	8.52E+2	6.57E+0	6.15E+1	3.65E-1	-3.97E+2	5.24E+2
PET	MJ	9.54E+2	4.00E+0	4.87E+0	9.63E+2	6.65E+0	6.55E+1	3.77E-1	-4.23E+2	6.13E+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	5.31E-1	4.21E-4	2.79E-4	5.32E-1	7.00E-4	6.48E-2	4.21E-4	-2.11E-1	3.87E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.16E-4	9.50E-6	5.22E-11	6.26E-4	1.58E-5	9.58E-5	4.13E-7	-3.18E-4	4.19E-4
NHWD	kg	3.07E+0	2.30E-1	2.01E-4	3.30E+0	3.83E-1	2.31E+0	1.61E+0	-1.09E+0	6.50E+0
RWD	kg	1.74E-3	2.53E-5	2.09E-11	1.77E-3	4.21E-5	2.17E-4	2.25E-6	-5.95E-4	1.43E-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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