

# Environmental Profile

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

Ecochain v3.5.80



Product: 3072528 - PVCU Double Coupler BR 250 SN4n FIN  
 Unit: 1 piece  
 Manufacturer: Wavin - PL -Buk - Extra products

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



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.

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

A1 Raw material supply A2 Transport A3 Manufacturing

## Construction process stage

A4 Transport gate to site  
 A5 Assembly / Construction installation process

## Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment  
 B6 Operational energy use B7 Operational water use

## End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing  
 C4 Disposal

## Benefits and loads beyond the system boundaries

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	3.58E+0	6.59E-2	1.45E-4	3.65E+0	4.40E-2	3.28E+0	1.64E-2	-2.12E+0	4.86E+0
GWP-f	kg CO2 eq	4.62E+0	6.58E-2	1.46E-4	4.68E+0	4.40E-2	2.11E+0	1.64E-2	-2.36E+0	4.49E+0
GWP-b	kg CO2 eq	-1.04E+0	4.00E-5	-1.54E-6	-1.04E+0	2.67E-5	1.18E+0	1.97E-5	2.40E-1	3.73E-1
GWP-luluc	kg CO2 eq	5.53E-3	2.33E-5	1.49E-7	5.56E-3	1.56E-5	5.11E-4	4.04E-7	-3.38E-3	2.70E-3
ODP	kg CFC11 eq	1.98E-6	1.52E-8	8.26E-12	1.99E-6	1.01E-8	1.43E-7	5.72E-10	-9.30E-7	1.22E-6
AP	mol H+ eq	2.31E-2	3.75E-4	1.47E-6	2.35E-2	2.50E-4	2.59E-3	1.40E-5	-8.92E-3	1.74E-2
EP-fw	kg P eq	2.04E-4	5.42E-7	8.24E-9	2.04E-4	3.62E-7	1.72E-5	1.83E-8	-9.21E-5	1.30E-4
EP-m	kg N eq	4.17E-3	1.34E-4	1.55E-7	4.30E-3	8.96E-5	6.66E-4	1.20E-5	-1.74E-3	3.33E-3
EP-T	mol N eq	4.55E-2	1.48E-3	1.85E-6	4.70E-2	9.87E-4	7.34E-3	5.57E-5	-1.91E-2	3.63E-2
POCP	kg NMVOC eq	1.60E-2	4.23E-4	6.28E-7	1.64E-2	2.82E-4	2.16E-3	1.94E-5	-6.39E-3	1.25E-2
ADP-mm	kg Sb eq	3.44E-3	1.70E-6	1.97E-8	3.44E-3	1.14E-6	9.81E-6	1.40E-8	-5.06E-5	3.40E-3
ADP-f	MJ	1.13E+2	1.01E+0	1.36E-3	1.14E+2	6.75E-1	6.69E+0	4.19E-2	-5.28E+1	6.89E+1
WDP	m3 depriv.	5.90E+0	3.10E-3	5.22E-5	5.91E+0	2.07E-3	2.64E-1	2.59E-4	-2.86E+0	3.31E+0
PM	disease inc.	2.06E-7	5.94E-9	9.08E-12	2.12E-7	3.97E-9	3.12E-8	2.88E-10	-8.58E-8	1.62E-7
IR	kBq U-235 eq	2.78E-1	4.42E-3	1.02E-6	2.83E-1	2.95E-3	2.37E-2	1.94E-4	-1.05E-1	2.04E-1
ETP-fw	CTUe	1.39E+2	8.21E-1	1.21E-2	1.40E+2	5.48E-1	5.10E+1	5.60E-1	-4.75E+1	1.44E+2
HTP-c	CTUh	3.91E-9	2.92E-11	6.17E-13	3.94E-9	1.95E-11	7.58E-10	1.15E-12	-1.46E-9	3.26E-9
HTP-nc	CTUh	1.10E-7	9.78E-10	1.57E-11	1.11E-7	6.53E-10	1.81E-8	1.11E-10	-3.97E-8	8.99E-8
SQP	Pt	1.16E+2	8.65E-1	2.24E-3	1.17E+2	5.77E-1	4.07E+0	1.07E-1	-1.25E+2	-2.50E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.95E+1	1.45E-2	2.40E-2	2.95E+1	9.68E-3	4.72E-1	1.63E-3	-2.12E+1	8.81E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.95E+1	1.45E-2	2.40E-2	2.95E+1	9.68E-3	4.72E-1	1.63E-3	-2.12E+1	8.81E+0
PENRE	MJ	1.21E+2	1.07E+0	1.44E-3	1.22E+2	7.16E-1	7.12E+0	4.44E-2	-5.70E+1	7.33E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.21E+2	1.07E+0	1.44E-3	1.22E+2	7.16E-1	7.12E+0	4.44E-2	-5.70E+1	7.33E+1
PET	MJ	1.51E+2	1.09E+0	2.55E-2	1.52E+2	7.26E-1	7.59E+0	4.61E-2	-7.82E+1	8.21E+1
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	7.81E-2	1.14E-4	1.46E-6	7.82E-2	7.64E-5	8.15E-3	5.15E-5	-3.69E-2	4.96E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.69E-4	2.58E-6	2.73E-13	4.72E-4	1.73E-6	1.17E-5	5.08E-8	-5.10E-5	4.34E-4
NHWD	kg	5.02E-1	6.26E-2	1.05E-6	5.65E-1	4.18E-2	2.64E-1	1.84E-1	-1.95E-1	8.60E-1
RWD	kg	2.86E-4	6.87E-6	1.10E-13	2.93E-4	4.59E-6	2.58E-5	2.73E-7	-9.83E-5	2.25E-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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