

Environmental Profile

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

Ecochain v3.5.80



Product: 4001034 - PVCU Repair Coupler BR 400 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	1.41E+1	1.07E-1	5.62E-1	1.48E+1	2.05E-1	8.88E+0	6.01E-2	-8.01E+0	1.59E+1
GWP-f	kg CO2 eq	1.57E+1	1.07E-1	5.67E-1	1.63E+1	2.04E-1	7.25E+0	6.01E-2	-7.96E+0	1.59E+1
GWP-b	kg CO2 eq	-1.56E+0	6.48E-5	-5.99E-3	-1.56E+0	1.24E-4	1.64E+0	7.53E-5	-4.75E-2	2.61E-2
GWP-luluc	kg CO2 eq	1.26E-2	3.78E-5	5.80E-4	1.33E-2	7.23E-5	2.24E-3	1.59E-6	-4.79E-3	1.08E-2
ODP	kg CFC11 eq	7.58E-6	2.46E-8	3.21E-8	7.64E-6	4.71E-8	5.95E-7	2.41E-9	-3.59E-6	4.69E-6
AP	mol H+ eq	7.30E-2	6.08E-4	5.72E-3	7.93E-2	1.16E-3	1.09E-2	5.74E-5	-2.80E-2	6.34E-2
EP-fw	kg P eq	6.48E-4	8.78E-7	3.20E-5	6.81E-4	1.68E-6	7.44E-5	7.18E-8	-2.61E-4	4.96E-4
EP-m	kg N eq	1.23E-2	2.17E-4	6.02E-4	1.31E-2	4.16E-4	2.72E-3	4.21E-5	-5.03E-3	1.13E-2
EP-T	mol N eq	1.36E-1	2.40E-3	7.20E-3	1.45E-1	4.59E-3	3.00E-2	2.30E-4	-5.48E-2	1.25E-1
POCP	kg NMVOC eq	4.91E-2	6.85E-4	2.44E-3	5.23E-2	1.31E-3	8.95E-3	7.83E-5	-1.85E-2	4.41E-2
ADP-mm	kg Sb eq	1.19E-3	2.76E-6	7.63E-5	1.27E-3	5.29E-6	4.16E-5	5.67E-8	-1.69E-4	1.15E-3
ADP-f	MJ	4.00E+2	1.64E+0	5.27E+0	4.07E+2	3.14E+0	2.93E+1	1.74E-1	-1.86E+2	2.53E+2
WDP	m3 depriv.	2.26E+1	5.03E-3	2.03E-1	2.28E+1	9.63E-3	1.12E+0	9.51E-4	-1.00E+1	1.39E+1
PM	disease inc.	6.29E-7	9.63E-9	3.53E-8	6.74E-7	1.84E-8	1.35E-7	1.19E-9	-1.85E-7	6.44E-7
IR	kBq U-235 eq	8.94E-1	7.16E-3	3.95E-3	9.05E-1	1.37E-2	1.02E-1	8.01E-4	-3.35E-1	6.86E-1
ETP-fw	CTUe	2.78E+2	1.33E+0	4.69E+1	3.26E+2	2.55E+0	2.10E+2	2.30E+0	-1.06E+2	4.35E+2
HTP-c	CTUh	1.07E-8	4.73E-11	2.39E-9	1.31E-8	9.06E-11	3.29E-9	4.45E-12	-3.85E-9	1.27E-8
HTP-nc	CTUh	3.16E-7	1.59E-9	6.08E-8	3.78E-7	3.04E-9	7.65E-8	4.51E-10	-1.31E-7	3.28E-7
SQP	Pt	2.05E+2	1.40E+0	8.69E+0	2.15E+2	2.68E+0	1.85E+1	4.40E-1	-5.05E+1	1.87E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.62E+1	2.35E-2	9.33E+1	1.50E+2	4.50E-2	2.05E+0	6.32E-3	-1.38E+1	1.38E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.62E+1	2.35E-2	9.33E+1	1.50E+2	4.50E-2	2.05E+0	6.32E-3	-1.38E+1	1.38E+2
PENRE	MJ	4.29E+2	1.74E+0	5.61E+0	4.36E+2	3.33E+0	3.12E+1	1.85E-1	-2.01E+2	2.70E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.29E+2	1.74E+0	5.61E+0	4.36E+2	3.33E+0	3.12E+1	1.85E-1	-2.01E+2	2.70E+2
PET	MJ	4.85E+2	1.76E+0	9.89E+1	5.86E+2	3.37E+0	3.32E+1	1.91E-1	-2.15E+2	4.08E+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	2.69E-1	1.85E-4	5.66E-3	2.74E-1	3.55E-4	3.28E-2	2.13E-4	-1.07E-1	2.01E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.10E-4	4.19E-6	1.06E-9	3.14E-4	8.02E-6	4.86E-5	2.09E-7	-1.61E-4	2.10E-4
NHWD	kg	1.53E+0	1.02E-1	4.09E-3	1.64E+0	1.94E-1	1.17E+0	8.14E-1	-5.54E-1	3.26E+0
RWD	kg	8.80E-4	1.11E-5	4.26E-10	8.91E-4	2.13E-5	1.10E-4	1.14E-6	-3.01E-4	7.23E-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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