

Environmental Profile

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

Ecochain v3.5.80



Product: 4001035 - PVCU Repair 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	2.66E+1	2.28E-1	4.08E-1	2.72E+1	3.75E-1	1.63E+1	1.12E-1	-1.49E+1	2.92E+1
GWP-f	kg CO2 eq	2.91E+1	2.28E-1	4.12E-1	2.97E+1	3.75E-1	1.37E+1	1.12E-1	-1.48E+1	2.91E+1
GWP-b	kg CO2 eq	-2.53E+0	1.38E-4	-4.35E-3	-2.53E+0	2.28E-4	2.67E+0	1.40E-4	-8.70E-2	4.71E-2
GWP-luluc	kg CO2 eq	2.33E-2	8.06E-5	4.21E-4	2.38E-2	1.33E-4	4.11E-3	2.94E-6	-8.76E-3	1.93E-2
ODP	kg CFC11 eq	1.40E-5	5.25E-8	2.33E-8	1.41E-5	8.64E-8	1.09E-6	4.44E-9	-6.61E-6	8.65E-6
AP	mol H+ eq	1.36E-1	1.30E-3	4.16E-3	1.41E-1	2.14E-3	1.99E-2	1.06E-4	-5.14E-2	1.12E-1
EP-fw	kg P eq	1.20E-3	1.87E-6	2.32E-5	1.23E-3	3.09E-6	1.36E-4	1.33E-7	-4.79E-4	8.86E-4
EP-m	kg N eq	2.29E-2	4.64E-4	4.37E-4	2.38E-2	7.64E-4	5.00E-3	7.91E-5	-9.22E-3	2.04E-2
EP-T	mol N eq	2.51E-1	5.12E-3	5.23E-3	2.62E-1	8.42E-3	5.51E-2	4.25E-4	-1.00E-1	2.25E-1
POCP	kg NMVOC eq	9.16E-2	1.46E-3	1.77E-3	9.49E-2	2.41E-3	1.64E-2	1.45E-4	-3.39E-2	7.99E-2
ADP-mm	kg Sb eq	2.31E-3	5.89E-6	5.55E-5	2.37E-3	9.70E-6	7.63E-5	1.05E-7	-3.14E-4	2.14E-3
ADP-f	MJ	7.45E+2	3.50E+0	3.83E+0	7.52E+2	5.76E+0	5.37E+1	3.21E-1	-3.45E+2	4.67E+2
WDP	m3 depriv.	4.18E+1	1.07E-2	1.47E-1	4.20E+1	1.77E-2	2.06E+0	1.74E-3	-1.84E+1	2.56E+1
PM	disease inc.	1.16E-6	2.06E-8	2.56E-8	1.21E-6	3.39E-8	2.48E-7	2.20E-9	-3.38E-7	1.15E-6
IR	kBq U-235 eq	1.67E+0	1.53E-2	2.87E-3	1.69E+0	2.52E-2	1.86E-1	1.48E-3	-6.16E-1	1.28E+0
ETP-fw	CTUe	5.15E+2	2.84E+0	3.41E+1	5.52E+2	4.67E+0	3.87E+2	4.23E+0	-1.94E+2	7.54E+2
HTP-c	CTUh	1.96E-8	1.01E-10	1.74E-9	2.15E-8	1.66E-10	6.01E-9	8.23E-12	-7.06E-9	2.06E-8
HTP-nc	CTUh	5.83E-7	3.38E-9	4.41E-8	6.31E-7	5.57E-9	1.40E-7	8.30E-10	-2.40E-7	5.38E-7
SQP	Pt	3.48E+2	2.99E+0	6.32E+0	3.57E+2	4.93E+0	3.39E+1	8.12E-1	-8.62E+1	3.11E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.83E+1	5.02E-2	6.78E+1	1.66E+2	8.26E-2	3.77E+0	1.17E-2	-2.40E+1	1.46E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.83E+1	5.02E-2	6.78E+1	1.66E+2	8.26E-2	3.77E+0	1.17E-2	-2.40E+1	1.46E+2
PENRE	MJ	7.98E+2	3.71E+0	4.07E+0	8.06E+2	6.11E+0	5.71E+1	3.41E-1	-3.72E+2	4.98E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.98E+2	3.71E+0	4.07E+0	8.06E+2	6.11E+0	5.71E+1	3.41E-1	-3.72E+2	4.98E+2
PET	MJ	8.97E+2	3.76E+0	7.18E+1	9.72E+2	6.19E+0	6.09E+1	3.53E-1	-3.96E+2	6.44E+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	4.99E-1	3.96E-4	4.12E-3	5.03E-1	6.51E-4	6.06E-2	3.94E-4	-1.96E-1	3.69E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.72E-4	8.94E-6	7.70E-10	5.81E-4	1.47E-5	8.92E-5	3.86E-7	-2.99E-4	3.86E-4
NHWD	kg	2.83E+0	2.17E-1	2.97E-3	3.05E+0	3.57E-1	2.15E+0	1.50E+0	-1.02E+0	6.04E+0
RWD	kg	1.65E-3	2.38E-5	3.09E-10	1.68E-3	3.92E-5	2.02E-4	2.11E-6	-5.54E-4	1.37E-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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