

Environmental Profile

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

Ecochain v3.5.80



Product: 3022147 - PVCU SemiReducer BR 315x160 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	1.03E+1	1.11E-1	1.96E-2	1.04E+1	1.42E-1	4.57E+0	4.18E-2	-5.74E+0	9.42E+0
GWP-f	kg CO2 eq	1.06E+1	1.11E-1	1.98E-2	1.08E+1	1.42E-1	4.12E+0	4.18E-2	-5.70E+0	9.36E+0
GWP-b	kg CO2 eq	-3.55E-1	6.75E-5	-2.09E-4	-3.55E-1	8.62E-5	4.46E-1	5.27E-5	-3.85E-2	5.30E-2
GWP-luluc	kg CO2 eq	8.79E-3	3.93E-5	2.03E-5	8.85E-3	5.03E-5	1.68E-3	1.14E-6	-3.64E-3	6.93E-3
ODP	kg CFC11 eq	5.60E-6	2.56E-8	1.12E-9	5.63E-6	3.27E-8	4.50E-7	1.64E-9	-2.79E-6	3.32E-6
AP	mol H+ eq	4.95E-2	6.33E-4	2.00E-4	5.04E-2	8.09E-4	7.83E-3	3.96E-5	-2.12E-2	3.78E-2
EP-fw	kg P eq	4.67E-4	9.14E-7	1.12E-6	4.69E-4	1.17E-6	5.57E-5	5.11E-8	-2.04E-4	3.22E-4
EP-m	kg N eq	8.37E-3	2.26E-4	2.10E-5	8.62E-3	2.89E-4	1.92E-3	2.43E-5	-3.72E-3	7.13E-3
EP-T	mol N eq	9.15E-2	2.50E-3	2.52E-4	9.42E-2	3.19E-3	2.11E-2	1.58E-4	-3.98E-2	7.89E-2
POCP	kg NMVOC eq	3.16E-2	7.13E-4	8.51E-5	3.24E-2	9.12E-4	6.34E-3	5.39E-5	-1.37E-2	2.61E-2
ADP-mm	kg Sb eq	5.05E-3	2.87E-6	2.67E-6	5.06E-3	3.67E-6	3.07E-5	3.96E-8	-1.14E-4	4.98E-3
ADP-f	MJ	2.70E+2	1.71E+0	1.84E-1	2.71E+2	2.18E+0	2.15E+1	1.19E-1	-1.37E+2	1.58E+2
WDP	m3 depriv.	1.67E+1	5.23E-3	7.08E-3	1.68E+1	6.69E-3	8.33E-1	8.08E-4	-7.96E+0	9.63E+0
PM	disease inc.	3.48E-7	1.00E-8	1.23E-9	3.59E-7	1.28E-8	9.80E-8	8.18E-10	-1.36E-7	3.35E-7
IR	kBq U-235 eq	5.90E-1	7.46E-3	1.38E-4	5.97E-1	9.53E-3	7.49E-2	5.45E-4	-2.58E-1	4.24E-1
ETP-fw	CTUe	2.28E+2	1.39E+0	1.64E+0	2.31E+2	1.77E+0	1.60E+2	1.76E+0	-7.90E+1	3.15E+2
HTP-c	CTUh	8.26E-9	4.93E-11	8.37E-11	8.39E-9	6.30E-11	2.46E-9	3.23E-12	-2.95E-9	7.97E-9
HTP-nc	CTUh	2.60E-7	1.65E-9	2.12E-9	2.63E-7	2.11E-9	5.69E-8	3.40E-10	-1.02E-7	2.21E-7
SQP	Pt	7.81E+1	1.46E+0	3.04E-1	7.99E+1	1.86E+0	1.34E+1	3.03E-1	-2.30E+1	7.24E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.98E+1	2.45E-2	3.26E+0	4.31E+1	3.13E-2	1.53E+0	4.28E-3	-7.55E+0	3.72E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.98E+1	2.45E-2	3.26E+0	4.31E+1	3.13E-2	1.53E+0	4.28E-3	-7.55E+0	3.72E+1
PENRE	MJ	2.89E+2	1.81E+0	1.96E-1	2.91E+2	2.31E+0	2.28E+1	1.26E-1	-1.48E+2	1.69E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.89E+2	1.81E+0	1.96E-1	2.91E+2	2.31E+0	2.28E+1	1.26E-1	-1.48E+2	1.69E+2
PET	MJ	3.29E+2	1.84E+0	3.46E+0	3.34E+2	2.35E+0	2.44E+1	1.31E-1	-1.55E+2	2.06E+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	1.87E-1	1.93E-4	1.98E-4	1.88E-1	2.47E-4	2.30E-2	1.46E-4	-8.34E-2	1.28E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.16E-4	4.36E-6	3.71E-11	8.20E-4	5.57E-6	3.48E-5	1.45E-7	-1.15E-4	7.46E-4
NHWD	kg	1.03E+0	1.06E-1	1.43E-4	1.14E+0	1.35E-1	8.12E-1	5.42E-1	-4.28E-1	2.20E+0
RWD	kg	5.40E-4	1.16E-5	1.49E-11	5.51E-4	1.48E-5	8.05E-5	7.77E-7	-2.28E-4	4.19E-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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