

Environmental Profile

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

Ecochain v3.5.80



Product: 3044081 - PVCU SemiReducer BR 250x110 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	7.45E+0	7.89E-2	2.23E-2	7.56E+0	1.03E-1	3.27E+0	3.06E-2	-4.21E+0	6.75E+0
GWP-f	kg CO2 eq	7.69E+0	7.88E-2	2.25E-2	7.79E+0	1.03E-1	2.96E+0	3.06E-2	-4.18E+0	6.71E+0
GWP-b	kg CO2 eq	-2.44E-1	4.78E-5	-2.38E-4	-2.44E-1	6.24E-5	3.11E-1	3.87E-5	-2.85E-2	3.88E-2
GWP-luluc	kg CO2 eq	6.24E-3	2.79E-5	2.30E-5	6.29E-3	3.64E-5	1.23E-3	8.29E-7	-2.69E-3	4.87E-3
ODP	kg CFC11 eq	4.15E-6	1.82E-8	1.27E-9	4.17E-6	2.37E-8	3.32E-7	1.19E-9	-2.06E-6	2.47E-6
AP	mol H+ eq	3.54E-2	4.49E-4	2.27E-4	3.60E-2	5.85E-4	5.73E-3	2.88E-5	-1.56E-2	2.67E-2
EP-fw	kg P eq	3.36E-4	6.48E-7	1.27E-6	3.38E-4	8.45E-7	4.09E-5	3.72E-8	-1.51E-4	2.29E-4
EP-m	kg N eq	5.98E-3	1.61E-4	2.39E-5	6.17E-3	2.09E-4	1.40E-3	1.76E-5	-2.73E-3	5.06E-3
EP-T	mol N eq	6.49E-2	1.77E-3	2.86E-4	6.70E-2	2.31E-3	1.54E-2	1.15E-4	-2.93E-2	5.55E-2
POCP	kg NMVOC eq	2.27E-2	5.06E-4	9.67E-5	2.33E-2	6.60E-4	4.62E-3	3.92E-5	-1.01E-2	1.85E-2
ADP-mm	kg Sb eq	2.67E-3	2.04E-6	3.03E-6	2.68E-3	2.66E-6	2.25E-5	2.88E-8	-8.40E-5	2.62E-3
ADP-f	MJ	1.97E+2	1.21E+0	2.09E-1	1.98E+2	1.58E+0	1.57E+1	8.66E-2	-1.01E+2	1.15E+2
WDP	m3 depriv.	1.23E+1	3.71E-3	8.04E-3	1.23E+1	4.84E-3	6.13E-1	5.80E-4	-5.88E+0	7.04E+0
PM	disease inc.	2.46E-7	7.11E-9	1.40E-9	2.55E-7	9.27E-9	7.14E-8	5.95E-10	-1.00E-7	2.36E-7
IR	kBq U-235 eq	4.31E-1	5.29E-3	1.57E-4	4.36E-1	6.89E-3	5.48E-2	3.97E-4	-1.90E-1	3.08E-1
ETP-fw	CTUe	1.54E+2	9.82E-1	1.86E+0	1.57E+2	1.28E+0	1.18E+2	1.30E+0	-5.82E+1	2.20E+2
HTP-c	CTUh	5.62E-9	3.50E-11	9.51E-11	5.75E-9	4.56E-11	1.79E-9	2.35E-12	-2.18E-9	5.41E-9
HTP-nc	CTUh	1.80E-7	1.17E-9	2.41E-9	1.84E-7	1.53E-9	4.18E-8	2.51E-10	-7.51E-8	1.52E-7
SQP	Pt	5.44E+1	1.03E+0	3.45E-1	5.57E+1	1.35E+0	9.75E+0	2.20E-1	-1.66E+1	5.05E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.34E+1	1.74E-2	3.71E+0	2.71E+1	2.26E-2	1.13E+0	3.13E-3	-5.50E+0	2.28E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.34E+1	1.74E-2	3.71E+0	2.71E+1	2.26E-2	1.13E+0	3.13E-3	-5.50E+0	2.28E+1
PENRE	MJ	2.11E+2	1.28E+0	2.23E-1	2.13E+2	1.67E+0	1.67E+1	9.19E-2	-1.09E+2	1.23E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.11E+2	1.28E+0	2.23E-1	2.13E+2	1.67E+0	1.67E+1	9.19E-2	-1.09E+2	1.23E+2
PET	MJ	2.35E+2	1.30E+0	3.93E+0	2.40E+2	1.70E+0	1.78E+1	9.51E-2	-1.14E+2	1.45E+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	1.36E-1	1.37E-4	2.25E-4	1.36E-1	1.78E-4	1.68E-2	1.06E-4	-6.15E-2	9.15E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.72E-4	3.09E-6	4.21E-11	4.75E-4	4.03E-6	2.53E-5	1.05E-7	-8.44E-5	4.20E-4
NHWD	kg	7.34E-1	7.50E-2	1.63E-4	8.09E-1	9.77E-2	5.88E-1	3.92E-1	-3.16E-1	1.57E+0
RWD	kg	3.96E-4	8.23E-6	1.69E-11	4.04E-4	1.07E-5	5.87E-5	5.64E-7	-1.68E-4	3.06E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777