

Environmental Profile

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

Ecochain v3.5.80



Product: 3044083 - PVCU SemiReducer BR 400x250 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	1.85E+1	2.03E-1	2.88E-2	1.88E+1	2.69E-1	8.61E+0	7.72E-2	-1.06E+1	1.71E+1
GWP-f	kg CO2 eq	1.96E+1	2.03E-1	2.91E-2	1.99E+1	2.69E-1	7.32E+0	7.72E-2	-1.05E+1	1.70E+1
GWP-b	kg CO2 eq	-1.11E+0	1.23E-4	-3.07E-4	-1.11E+0	1.63E-4	1.29E+0	9.84E-5	-7.25E-2	1.09E-1
GWP-luluc	kg CO2 eq	1.63E-2	7.18E-5	2.97E-5	1.64E-2	9.52E-5	3.19E-3	2.10E-6	-6.90E-3	1.27E-2
ODP	kg CFC11 eq	1.05E-5	4.68E-8	1.64E-9	1.06E-5	6.20E-8	8.57E-7	3.08E-9	-5.23E-6	6.26E-6
AP	mol H+ eq	9.05E-2	1.16E-3	2.93E-4	9.19E-2	1.53E-3	1.49E-2	7.40E-5	-3.99E-2	6.85E-2
EP-fw	kg P eq	8.65E-4	1.67E-6	1.64E-6	8.68E-4	2.21E-6	1.06E-4	9.45E-8	-3.85E-4	5.91E-4
EP-m	kg N eq	1.54E-2	4.14E-4	3.09E-5	1.58E-2	5.48E-4	3.64E-3	4.48E-5	-6.99E-3	1.30E-2
EP-T	mol N eq	1.68E-1	4.56E-3	3.69E-4	1.73E-1	6.04E-3	4.01E-2	2.96E-4	-7.53E-2	1.44E-1
POCP	kg NMVOC eq	5.74E-2	1.30E-3	1.25E-4	5.88E-2	1.73E-3	1.20E-2	1.01E-4	-2.57E-2	4.70E-2
ADP-mm	kg Sb eq	7.51E-3	5.25E-6	3.91E-6	7.52E-3	6.96E-6	5.84E-5	7.38E-8	-2.12E-4	7.38E-3
ADP-f	MJ	4.95E+2	3.12E+0	2.70E-1	4.98E+2	4.13E+0	4.08E+1	2.23E-1	-2.54E+2	2.89E+2
WDP	m3 depriv.	3.14E+1	9.56E-3	1.04E-2	3.15E+1	1.27E-2	1.58E+0	1.41E-3	-1.50E+1	1.81E+1
PM	disease inc.	6.50E-7	1.83E-8	1.81E-9	6.70E-7	2.43E-8	1.86E-7	1.53E-9	-2.59E-7	6.23E-7
IR	kBq U-235 eq	1.07E+0	1.36E-2	2.03E-4	1.08E+0	1.80E-2	1.42E-1	1.02E-3	-4.84E-1	7.62E-1
ETP-fw	CTUe	4.03E+2	2.53E+0	2.40E+0	4.08E+2	3.35E+0	3.04E+2	3.34E+0	-1.50E+2	5.68E+2
HTP-c	CTUh	1.51E-8	9.00E-11	1.23E-10	1.53E-8	1.19E-10	4.61E-9	5.95E-12	-5.56E-9	1.45E-8
HTP-nc	CTUh	4.73E-7	3.02E-9	3.11E-9	4.79E-7	4.00E-9	1.08E-7	6.44E-10	-1.92E-7	4.00E-7
SQP	Pt	1.84E+2	2.67E+0	4.46E-1	1.87E+2	3.53E+0	2.55E+1	5.67E-1	-5.19E+1	1.65E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.67E+1	4.47E-2	4.78E+0	8.16E+1	5.92E-2	2.92E+0	8.02E-3	-1.59E+1	6.86E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.67E+1	4.47E-2	4.78E+0	8.16E+1	5.92E-2	2.92E+0	8.02E-3	-1.59E+1	6.86E+1
PENRE	MJ	5.31E+2	3.31E+0	2.87E-1	5.34E+2	4.38E+0	4.34E+1	2.37E-1	-2.74E+2	3.09E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.31E+2	3.31E+0	2.87E-1	5.34E+2	4.38E+0	4.34E+1	2.37E-1	-2.74E+2	3.09E+2
PET	MJ	6.08E+2	3.35E+0	5.07E+0	6.16E+2	4.44E+0	4.63E+1	2.45E-1	-2.90E+2	3.77E+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	3.46E-1	3.53E-4	2.90E-4	3.46E-1	4.67E-4	4.34E-2	2.73E-4	-1.57E-1	2.34E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.29E-3	7.97E-6	5.43E-11	1.30E-3	1.06E-5	6.58E-5	2.71E-7	-2.12E-4	1.16E-3
NHWD	kg	1.92E+0	1.93E-1	2.10E-4	2.11E+0	2.56E-1	1.53E+0	1.02E+0	-8.07E-1	4.12E+0
RWD	kg	9.61E-4	2.12E-5	2.18E-11	9.82E-4	2.81E-5	1.53E-4	1.46E-6	-4.28E-4	7.37E-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