Environmental Profile

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

Ecochain v3.5.64

Product:	3041850 - PE100 Pressure Pipe BK 125x11.4 L=12
Unit:	1 piece
Manufacturer:	Wavin - DE - Westeregeln - verified
Address:	Borrweg 10 39448 Börde-Hakel Germany
Contact:	https://www.wavin.com/en-en

PE pressure pipe that offers the right solution for every part of the main network in your sewerage system.

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	11-08-2022
End of validity:	11-08-2027
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 - DE - Westeregeln - verified (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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.93E+1	2.25E+0	2.35E+0	1.04E+2	1.30E+0	4.23E+1	7.21E-1	-6.53E+1	8.30E+1
GWP-f	kg CO2 eq	9.88E+1	2.25E+0	1.89E+0	1.03E+2	1.30E+0	4.24E+1	7.21E-1	-6.51E+1	8.23E+1
GWP-b	kg CO2 eq	4.81E-1	1.04E-3	2.14E-1	6.96E-1	7.90E-4	-4.91E-2	5.41E-4	-2.47E-1	4.02E-1
GWP-luluc	kg CO2 eq	2.95E-2	8.25E-4	2.43E-1	2.73E-1	4.61E-4	7.31E-3	1.03E-5	-1.48E-2	2.66E-1
ODP	kg CFC11 eq	5.42E-6	4.97E-7	2.32E-7	6.14E-6	3.00E-7	9.52E-7	1.54E-8	-3.12E-6	4.29E-6
AP	mol H+ eq	3.69E-1	1.31E-2	1.15E-2	3.93E-1	7.41E-3	4.00E-2	3.67E-4	-1.80E-1	2.61E-1
EP-fw	kg P eq	1.63E-3	2.27E-5	4.37E-5	1.70E-3	1.07E-5	2.11E-4	4.77E-7	-8.11E-4	1.11E-3
EP-m	kg N eq	6.17E-2	4.60E-3	2.23E-3	6.85E-2	2.65E-3	1.16E-2	2.60E-4	-3.29E-2	5.01E-2
EP-T	mol N eq	6.87E-1	5.07E-2	2.28E-2	7.61E-1	2.92E-2	1.28E-1	1.49E-3	-3.66E-1	5.53E-1
POCP	kg NMVOC eq	3.29E-1	1.45E-2	6.56E-3	3.50E-1	8.36E-3	4.05E-2	5.84E-4	-1.71E-1	2.29E-1
ADP-mm	kg Sb eq	8.89E-4	5.71E-5	6.13E-5	1.01E-3	3.37E-5	1.58E-4	3.68E-7	-4.20E-4	7.79E-4
ADP-f	MJ	3.51E+3	3.40E+1	2.18E+1	3.57E+3	2.00E+1	1.27E+2	1.12E+0	-1.95E+3	1.77E+3
WDP	m3 depriv.	7.57E+1	1.21E-1	1.39E+1	8.97E+1	6.13E-2	2.49E+0	5.14E-3	-3.79E+1	5.44E+1
PM	disease inc.	3.51E-6	2.02E-7	9.68E-8	3.81E-6	1.17E-7	6.58E-7	7.72E-9	-1.42E-6	3.17E-6
IR	kBq U-235 eq	3.03E+0	1.42E-1	5.42E-2	3.23E+0	8.73E-2	3.82E-1	5.23E-3	-1.18E+0	2.52E+0
ETP-fw	CTUe	6.32E+2	3.03E+1	5.74E+1	7.19E+2	1.62E+1	1.44E+2	9.90E-1	-2.83E+2	5.97E+2
HTP-c	CTUh	2.59E-8	9.82E-10	2.15E-9	2.90E-8	5.77E-10	1.71E-8	2.73E-11	-1.35E-8	3.32E-8
HTP-nc	CTUh	6.14E-7	3.31E-8	5.64E-8	7.03E-7	1.93E-8	2.16E-7	6.29E-10	-3.01E-7	6.38E-7
SQP	Pt	1.34E+2	2.95E+1	1.91E+0	1.65E+2	1.71E+1	1.01E+2	2.88E+0	-6.19E+1	2.24E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.66E+1	4.25E-1	1.31E+2	1.88E+2	2.87E-1	6.26E+0	4.45E-2	-2.82E+1	1.66E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.66E+1	4.25E-1	1.31E+2	1.88E+2	2.87E-1	6.26E+0	4.45E-2	-2.82E+1	1.66E+2
PENRE	MJ	3.77E+3	3.61E+1	2.33E+1	3.83E+3	2.12E+1	1.35E+2	1.19E+0	-2.11E+3	1.88E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.77E+3	3.61E+1	2.33E+1	3.83E+3	2.12E+1	1.35E+2	1.19E+0	-2.11E+3	1.88E+3
PET	MJ	3.83E+3	3.65E+1	1.54E+2	4.02E+3	2.15E+1	1.41E+2	1.24E+0	-2.13E+3	2.05E+3
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	1.15E+0	4.14E-3	3.30E-1	1.48E+0	2.26E-3	7.33E-2	1.39E-3	-5.79E-1	9.77E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.66E-4	8.61E-5	3.17E-5	5.84E-4	5.11E-5	2.06E-4	1.35E-6	-5.73E-4	2.70E-4
NHWD	kg	3.18E+0	2.15E+0	4.07E-2	5.37E+0	1.24E+0	6.23E+0	4.95E+0	-1.59E+0	1.62E+1
RWD	kg	3.31E-3	2.23E-4	7.58E-5	3.61E-3	1.36E-4	4.84E-4	7.35E-6	-1.09E-3	3.14E-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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