Environmental Profile

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

Ecochain v3.5.64

Product:	3041797 - PE100 Pressure Pipe BK 75x6.8 L=50
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	1.49E+2	3.37E+0	3.84E+0	1.56E+2	1.95E+0	6.34E+1	1.08E+0	-9.77E+1	1.25E+2
GWP-f	kg CO2 eq	1.48E+2	3.37E+0	3.06E+0	1.54E+2	1.95E+0	6.35E+1	1.08E+0	-9.74E+1	1.23E+2
GWP-b	kg CO2 eq	7.24E-1	1.56E-3	3.64E-1	1.09E+0	1.18E-3	-7.79E-2	8.10E-4	-3.69E-1	6.45E-1
GWP-luluc	kg CO2 eq	4.42E-2	1.24E-3	4.14E-1	4.60E-1	6.89E-4	1.09E-2	1.55E-5	-2.22E-2	4.49E-1
ODP	kg CFC11 eq	8.11E-6	7.44E-7	3.60E-7	9.21E-6	4.49E-7	1.42E-6	2.30E-8	-4.67E-6	6.44E-6
AP	mol H+ eq	5.52E-1	1.95E-2	1.89E-2	5.90E-1	1.11E-2	5.99E-2	5.49E-4	-2.70E-1	3.92E-1
EP-fw	kg P eq	2.44E-3	3.40E-5	7.16E-5	2.54E-3	1.60E-5	3.16E-4	7.13E-7	-1.21E-3	1.66E-3
EP-m	kg N eq	9.22E-2	6.89E-3	3.53E-3	1.03E-1	3.97E-3	1.74E-2	3.89E-4	-4.93E-2	7.52E-2
EP-T	mol N eq	1.03E+0	7.59E-2	3.65E-2	1.14E+0	4.38E-2	1.92E-1	2.23E-3	-5.48E-1	8.30E-1
POCP	kg NMVOC eq	4.93E-1	2.17E-2	1.05E-2	5.25E-1	1.25E-2	6.06E-2	8.74E-4	-2.56E-1	3.43E-1
ADP-mm	kg Sb eq	1.33E-3	8.54E-5	1.04E-4	1.52E-3	5.04E-5	2.37E-4	5.51E-7	-6.29E-4	1.18E-3
ADP-f	MJ	5.26E+3	5.08E+1	3.49E+1	5.35E+3	2.99E+1	1.90E+2	1.68E+0	-2.92E+3	2.65E+3
WDP	m3 depriv.	1.13E+2	1.82E-1	2.36E+1	1.37E+2	9.18E-2	3.73E+0	7.70E-3	-5.67E+1	8.41E+1
PM	disease inc.	5.25E-6	3.03E-7	1.54E-7	5.71E-6	1.76E-7	9.85E-7	1.15E-8	-2.13E-6	4.75E-6
IR	kBq U-235 eq	4.54E+0	2.13E-1	8.26E-2	4.83E+0	1.31E-1	5.72E-1	7.83E-3	-1.76E+0	3.78E+0
ETP-fw	CTUe	9.46E+2	4.53E+1	9.55E+1	1.09E+3	2.43E+1	2.15E+2	1.48E+0	-4.24E+2	9.04E+2
HTP-c	CTUh	3.87E-8	1.47E-9	3.58E-9	4.38E-8	8.64E-10	2.56E-8	4.08E-11	-2.02E-8	5.00E-8
HTP-nc	CTUh	9.18E-7	4.96E-8	9.51E-8	1.06E-6	2.89E-8	3.23E-7	9.42E-10	-4.51E-7	9.65E-7
SQP	Pt	2.00E+2	4.41E+1	2.88E+0	2.47E+2	2.56E+1	1.52E+2	4.31E+0	-9.26E+1	3.36E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.47E+1	6.36E-1	2.23E+2	3.09E+2	4.29E-1	9.37E+0	6.65E-2	-4.22E+1	2.76E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.47E+1	6.36E-1	2.23E+2	3.09E+2	4.29E-1	9.37E+0	6.65E-2	-4.22E+1	2.76E+2
PENRE	MJ	5.64E+3	5.40E+1	3.74E+1	5.73E+3	3.17E+1	2.02E+2	1.78E+0	-3.15E+3	2.82E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.64E+3	5.40E+1	3.74E+1	5.73E+3	3.17E+1	2.02E+2	1.78E+0	-3.15E+3	2.82E+3
PET	MJ	5.73E+3	5.46E+1	2.61E+2	6.04E+3	3.22E+1	2.12E+2	1.85E+0	-3.19E+3	3.09E+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	1.71E+0	6.19E-3	5.60E-1	2.28E+0	3.38E-3	1.10E-1	2.08E-3	-8.67E-1	1.53E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.99E-4	1.29E-4	4.75E-5	8.75E-4	7.65E-5	3.09E-4	2.02E-6	-8.58E-4	4.05E-4
NHWD	kg	4.76E+0	3.22E+0	6.17E-2	8.05E+0	1.85E+0	9.33E+0	7.41E+0	-2.38E+0	2.43E+1
RWD	kg	4.95E-3	3.34E-4	1.14E-4	5.40E-3	2.03E-4	7.24E-4	1.10E-5	-1.64E-3	4.70E-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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