Environmental Profile

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

Ecochain v3.5.64

Product:	3065446 - PE Drain Pipe BK 110 L=6 DV
Unit:	1 piece
Manufacturer:	Wavin - SE - Eskilstuna

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	20-06-2022
End of validity:	20-06-2027
Verifier:	Harry van Ewijk - 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 - SE - Eskilstuna (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	6.90E+0	6.36E-3	2.34E-1	7.14E+0	8.69E-2	3.43E+0	4.80E-2	-4.61E+0	6.09E+0
GWP-f	kg CO2 eq	7.16E+0	6.35E-3	1.69E-1	7.34E+0	8.69E-2	3.14E+0	4.81E-2	-4.59E+0	6.02E+0
GWP-b	kg CO2 eq	-2.69E-1	2.93E-6	4.45E-2	-2.25E-1	5.27E-5	2.91E-1	3.61E-5	-1.63E-2	5.00E-2
GWP-luluc	kg CO2 eq	2.84E-3	2.33E-6	1.97E-2	2.25E-2	3.07E-5	4.92E-4	7.00E-7	-1.12E-3	2.19E-2
ODP	kg CFC11 eq	2.31E-7	1.40E-9	1.92E-8	2.52E-7	2.00E-8	6.49E-8	1.03E-9	-2.32E-7	1.05E-7
AP	mol H+ eq	2.82E-2	3.68E-5	1.43E-3	2.97E-2	4.95E-4	2.75E-3	2.46E-5	-1.25E-2	2.04E-2
EP-fw	kg P eq	1.40E-4	6.41E-8	3.12E-6	1.43E-4	7.15E-7	1.42E-5	3.21E-8	-5.71E-5	1.01E-4
EP-m	kg N eq	4.72E-3	1.30E-5	4.25E-4	5.16E-3	1.77E-4	8.06E-4	1.73E-5	-2.33E-3	3.83E-3
EP-T	mol N eq	5.44E-2	1.43E-4	4.66E-3	5.92E-2	1.95E-3	8.87E-3	9.96E-5	-2.60E-2	4.42E-2
POCP	kg NMVOC eq	2.43E-2	4.09E-5	1.30E-3	2.57E-2	5.58E-4	2.79E-3	3.90E-5	-1.20E-2	1.71E-2
ADP-mm	kg Sb eq	1.38E-4	1.61E-7	5.09E-6	1.43E-4	2.25E-6	1.07E-5	2.47E-8	-2.89E-5	1.27E-4
ADP-f	MJ	2.36E+2	9.58E-2	1.68E+0	2.38E+2	1.33E+0	8.57E+0	7.50E-2	-1.34E+2	1.14E+2
WDP	m3 depriv.	5.64E+0	3.43E-4	1.08E+0	6.73E+0	4.09E-3	1.68E-1	3.75E-4	-2.56E+0	4.34E+0
PM	disease inc.	2.39E-7	5.70E-10	2.42E-8	2.64E-7	7.84E-9	4.48E-8	5.16E-10	-1.02E-7	2.15E-7
IR	kBq U-235 eq	1.77E-1	4.01E-4	5.00E-3	1.82E-1	5.83E-3	2.59E-2	3.49E-4	-8.10E-2	1.34E-1
ETP-fw	CTUe	5.66E+1	8.54E-2	4.69E+0	6.14E+1	1.08E+0	9.80E+0	6.61E-2	-2.11E+1	5.13E+1
HTP-c	CTUh	2.83E-9	2.77E-12	1.85E-10	3.02E-9	3.85E-11	1.20E-9	1.85E-12	-1.02E-9	3.24E-9
HTP-nc	CTUh	5.86E-8	9.34E-11	5.05E-9	6.37E-8	1.29E-9	1.49E-8	4.22E-11	-1.69E-8	6.31E-8
SQP	Pt	3.68E+1	8.31E-2	2.21E-1	3.71E+1	1.14E+0	6.86E+0	1.92E-1	-2.49E+1	2.04E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.12E+0	1.20E-3	1.06E+1	1.87E+1	1.91E-2	4.22E-1	2.95E-3	-4.98E+0	1.42E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.12E+0	1.20E-3	1.06E+1	1.87E+1	1.91E-2	4.22E-1	2.95E-3	-4.98E+0	1.42E+1
PENRE	MJ	2.54E+2	1.02E-1	1.79E+0	2.55E+2	1.42E+0	9.14E+0	7.96E-2	-1.45E+2	1.21E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.54E+2	1.02E-1	1.79E+0	2.55E+2	1.42E+0	9.14E+0	7.96E-2	-1.45E+2	1.21E+2
PET	MJ	2.62E+2	1.03E-1	1.24E+1	2.74E+2	1.43E+0	9.56E+0	8.26E-2	-1.50E+2	1.35E+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	9.15E-2	1.17E-5	2.58E-2	1.17E-1	1.51E-4	4.98E-3	9.26E-5	-3.93E-2	8.32E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.75E-5	2.43E-7	2.56E-6	5.03E-5	3.41E-6	1.41E-5	9.04E-8	-4.62E-5	2.17E-5
NHWD	kg	3.75E-1	6.08E-3	7.85E-3	3.89E-1	8.26E-2	4.35E-1	3.30E-1	-1.21E-1	1.12E+0
RWD	kg	1.59E-4	6.29E-7	7.12E-6	1.67E-4	9.07E-6	3.29E-5	4.90E-7	-7.63E-5	1.33E-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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