

Environmental Profile

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

Ecochain v3.5.80



Product: 3045392 - Basic 425 PP Straight 160
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

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



Ensuring a long service life and high efficiency of the sewage network requires fitting with wells ensuring its ventilation, cleaning and inspection. Wavin offers a wide range of manholes and manholes (inspection chambers) of different diameters, different levels of technical sophistication, and thus for different areas of application.

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

This document and supporting material contain confidential and proprietary business information of Wavin - PL -Buk - Extra products. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - PL -Buk - Extra products.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	-2.09E+0	4.06E-1	1.13E-1	-1.57E+0	1.04E-1	2.00E+1	5.32E-2	-6.80E+0	1.18E+1
GWP-f	kg CO2 eq	1.28E+1	4.06E-1	1.14E-1	1.33E+1	1.04E-1	5.03E+0	5.32E-2	-6.78E+0	1.18E+1
GWP-b	kg CO2 eq	-1.49E+1	2.46E-4	-1.20E-3	-1.49E+1	6.32E-5	1.50E+1	4.76E-5	-1.43E-2	4.11E-2
GWP-luluc	kg CO2 eq	2.38E-2	1.44E-4	1.17E-4	2.41E-2	3.69E-5	5.81E-4	9.24E-7	-6.85E-3	1.79E-2
ODP	kg CFC11 eq	1.12E-6	9.35E-8	6.45E-9	1.22E-6	2.40E-8	9.11E-8	1.36E-9	-4.78E-7	8.55E-7
AP	mol H+ eq	5.92E-2	2.31E-3	1.15E-3	6.27E-2	5.93E-4	4.05E-3	3.25E-5	-2.48E-2	4.25E-2
EP-fw	kg P eq	3.07E-4	3.34E-6	6.42E-6	3.16E-4	8.57E-7	1.72E-5	4.25E-8	-1.29E-4	2.05E-4
EP-m	kg N eq	1.18E-2	8.27E-4	1.21E-4	1.27E-2	2.12E-4	1.30E-3	2.91E-5	-5.62E-3	8.65E-3
EP-T	mol N eq	1.35E-1	9.12E-3	1.45E-3	1.45E-1	2.34E-3	1.44E-2	1.32E-4	-6.65E-2	9.56E-2
POCP	kg NMVOC eq	5.41E-2	2.61E-3	4.90E-4	5.72E-2	6.69E-4	4.29E-3	4.91E-5	-2.50E-2	3.72E-2
ADP-mm	kg Sb eq	1.03E-3	1.05E-5	1.53E-5	1.06E-3	2.69E-6	1.36E-5	3.26E-8	-8.49E-5	9.88E-4
ADP-f	MJ	3.76E+2	6.23E+0	1.06E+0	3.83E+2	1.60E+0	1.08E+1	9.91E-2	-1.79E+2	2.17E+2
WDP	m3 depriv.	8.00E+0	1.91E-2	4.07E-2	8.06E+0	4.91E-3	2.15E-1	4.77E-4	-2.90E+0	5.38E+0
PM	disease inc.	8.55E-7	3.66E-8	7.08E-9	8.99E-7	9.40E-9	5.89E-8	6.80E-10	-3.40E-7	6.28E-7
IR	kBq U-235 eq	4.90E-1	2.72E-2	7.94E-4	5.18E-1	6.99E-3	3.43E-2	4.63E-4	-1.53E-1	4.07E-1
ETP-fw	CTUe	1.62E+2	5.06E+0	9.43E+0	1.76E+2	1.30E+0	1.52E+1	1.07E-1	-7.85E+1	1.14E+2
HTP-c	CTUh	9.96E-9	1.80E-10	4.81E-10	1.06E-8	4.62E-11	1.70E-9	2.45E-12	-5.14E-9	7.23E-9
HTP-nc	CTUh	1.41E-7	6.03E-9	1.22E-8	1.59E-7	1.55E-9	1.93E-8	5.92E-11	-6.28E-8	1.17E-7
SQP	Pt	1.31E+3	5.33E+0	1.75E+0	1.31E+3	1.37E+0	8.45E+0	2.54E-1	-8.73E+2	4.50E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.06E+2	8.94E-2	1.87E+1	2.25E+2	2.29E-2	5.09E-1	3.98E-3	-1.36E+2	8.96E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.06E+2	8.94E-2	1.87E+1	2.25E+2	2.29E-2	5.09E-1	3.98E-3	-1.36E+2	8.96E+1
PENRE	MJ	4.03E+2	6.61E+0	1.13E+0	4.11E+2	1.70E+0	1.15E+1	1.05E-1	-1.93E+2	2.31E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.03E+2	6.61E+0	1.13E+0	4.11E+2	1.70E+0	1.15E+1	1.05E-1	-1.93E+2	2.31E+2
PET	MJ	6.09E+2	6.70E+0	1.99E+1	6.35E+2	1.72E+0	1.20E+1	1.09E-1	-3.28E+2	3.21E+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	1.54E-1	7.05E-4	1.14E-3	1.56E-1	1.81E-4	9.00E-3	1.22E-4	-5.11E-2	1.14E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.91E-4	1.59E-5	2.13E-10	2.07E-4	4.09E-6	1.98E-5	1.19E-7	-1.15E-4	1.16E-4
NHWD	kg	1.38E+0	3.86E-1	8.22E-4	1.77E+0	9.91E-2	6.29E-1	4.36E-1	-5.90E-1	2.34E+0
RWD	kg	5.78E-4	4.24E-5	8.55E-11	6.21E-4	1.09E-5	4.43E-5	6.48E-7	-1.64E-4	5.12E-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