

Environmental Profile

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

Ecochain v3.5.80



Product: 3045397 - Basic 425 PP Junction X90 200+2x160
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

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.

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]

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	-4.45E+0	4.30E-1	1.36E-1	-3.89E+0	1.17E-1	2.51E+1	5.97E-2	-7.77E+0	1.36E+1
GWP-f	kg CO2 eq	1.48E+1	4.30E-1	1.37E-1	1.54E+1	1.17E-1	5.73E+0	5.97E-2	-7.75E+0	1.36E+1
GWP-b	kg CO2 eq	-1.93E+1	2.61E-4	-1.45E-3	-1.93E+1	7.08E-5	1.94E+1	5.35E-5	-1.59E-2	4.25E-2
GWP-luluc	kg CO2 eq	2.69E-2	1.52E-4	1.40E-4	2.72E-2	4.13E-5	6.55E-4	1.04E-6	-8.31E-3	1.95E-2
ODP	kg CFC11 eq	1.32E-6	9.90E-8	7.76E-9	1.43E-6	2.69E-8	1.05E-7	1.52E-9	-5.60E-7	1.00E-6
AP	mol H+ eq	6.93E-2	2.45E-3	1.38E-3	7.32E-2	6.64E-4	4.74E-3	3.65E-5	-2.93E-2	4.93E-2
EP-fw	kg P eq	3.66E-4	3.54E-6	7.73E-6	3.78E-4	9.59E-7	1.94E-5	4.77E-8	-1.52E-4	2.46E-4
EP-m	kg N eq	1.40E-2	8.76E-4	1.46E-4	1.50E-2	2.38E-4	1.55E-3	3.29E-5	-6.73E-3	1.01E-2
EP-T	mol N eq	1.60E-1	9.65E-3	1.74E-3	1.72E-1	2.62E-3	1.71E-2	1.48E-4	-8.05E-2	1.11E-1
POCP	kg NMVOC eq	6.35E-2	2.76E-3	5.89E-4	6.69E-2	7.49E-4	5.08E-3	5.52E-5	-2.95E-2	4.32E-2
ADP-mm	kg Sb eq	1.19E-3	1.11E-5	1.85E-5	1.22E-3	3.02E-6	1.56E-5	3.66E-8	-9.83E-5	1.14E-3
ADP-f	MJ	4.29E+2	6.60E+0	1.27E+0	4.37E+2	1.79E+0	1.23E+1	1.11E-1	-2.03E+2	2.48E+2
WDP	m3 depriv.	9.07E+0	2.02E-2	4.90E-2	9.14E+0	5.49E-3	2.43E-1	5.38E-4	-3.28E+0	6.12E+0
PM	disease inc.	1.07E-6	3.88E-8	8.53E-9	1.12E-6	1.05E-8	6.80E-8	7.63E-10	-4.09E-7	7.86E-7
IR	kBq U-235 eq	5.81E-1	2.88E-2	9.56E-4	6.11E-1	7.82E-3	3.94E-2	5.20E-4	-1.78E-1	4.80E-1
ETP-fw	CTUe	1.94E+2	5.36E+0	1.13E+1	2.11E+2	1.45E+0	1.74E+1	1.21E-1	-9.84E+1	1.32E+2
HTP-c	CTUh	1.22E-8	1.91E-10	5.79E-10	1.30E-8	5.17E-11	2.04E-9	2.75E-12	-6.16E-9	8.95E-9
HTP-nc	CTUh	1.68E-7	6.39E-9	1.47E-8	1.89E-7	1.73E-9	2.22E-8	6.66E-11	-7.58E-8	1.37E-7
SQP	Pt	1.69E+3	5.64E+0	2.10E+0	1.70E+3	1.53E+0	9.62E+0	2.85E-1	-1.07E+3	6.42E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.64E+2	9.46E-2	2.26E+1	2.86E+2	2.57E-2	5.76E-1	4.48E-3	-1.67E+2	1.20E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.64E+2	9.46E-2	2.26E+1	2.86E+2	2.57E-2	5.76E-1	4.48E-3	-1.67E+2	1.20E+2
PENRE	MJ	4.60E+2	7.00E+0	1.36E+0	4.68E+2	1.90E+0	1.31E+1	1.18E-1	-2.19E+2	2.64E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.60E+2	7.00E+0	1.36E+0	4.68E+2	1.90E+0	1.31E+1	1.18E-1	-2.19E+2	2.64E+2
PET	MJ	7.23E+2	7.10E+0	2.39E+1	7.54E+2	1.93E+0	1.37E+1	1.22E-1	-3.86E+2	3.84E+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	1.77E-1	7.46E-4	1.37E-3	1.79E-1	2.03E-4	1.04E-2	1.37E-4	-5.83E-2	1.32E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.33E-4	1.69E-5	2.56E-10	2.50E-4	4.58E-6	2.27E-5	1.34E-7	-1.35E-4	1.42E-4
NHWD	kg	1.66E+0	4.09E-1	9.90E-4	2.07E+0	1.11E-1	7.43E-1	4.89E-1	-7.08E-1	2.71E+0
RWD	kg	6.85E-4	4.49E-5	1.03E-10	7.30E-4	1.22E-5	5.09E-5	7.28E-7	-1.93E-4	6.01E-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