

Environmental Profile

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

Ecochain v3.5.64



Product: 3017942 - Prot.Pipe BK 90x8,2 L=100
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
Address: Borrweg 10
39448 Börde-Hakel
Germany
Contact: https://www.wavin.com/en-en

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					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 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.33E+1	1.85E-1	8.73E+0	8.22E+1	5.59E+0	1.82E+2	3.09E+0	3.97E+0	2.76E+2
GWP-f	kg CO2 eq	5.84E+1	1.85E-1	7.17E+0	6.58E+1	5.59E+0	1.82E+2	3.09E+0	3.56E+0	2.60E+2
GWP-b	kg CO2 eq	1.48E+1	8.55E-5	7.37E-1	1.55E+1	3.39E-3	-2.24E-1	2.32E-3	4.11E-1	1.57E+1
GWP-luluc	kg CO2 eq	1.10E-1	6.78E-5	8.30E-1	9.40E-1	1.98E-3	3.14E-2	4.50E-5	2.28E-2	9.96E-1
ODP	kg CFC11 eq	5.01E-6	4.09E-8	9.41E-7	5.99E-6	1.29E-6	4.08E-6	6.61E-8	-6.15E-6	5.28E-6
AP	mol H+ eq	3.22E-1	1.07E-3	4.24E-2	3.65E-1	3.18E-2	1.72E-1	1.58E-3	2.40E-1	8.11E-1
EP-fw	kg P eq	5.15E-3	1.87E-6	1.63E-4	5.31E-3	4.60E-5	9.05E-4	2.06E-6	1.31E-3	7.57E-3
EP-m	kg N eq	5.06E-2	3.78E-4	8.73E-3	5.97E-2	1.14E-2	4.99E-2	1.11E-3	3.22E-2	1.54E-1
EP-T	mol N eq	5.32E-1	4.17E-3	8.80E-2	6.24E-1	1.25E-1	5.49E-1	6.40E-3	3.62E-1	1.67E+0
POCP	kg NMVOC eq	1.35E-1	1.19E-3	2.53E-2	1.62E-1	3.59E-2	1.74E-1	2.51E-3	2.09E-1	5.83E-1
ADP-mm	kg Sb eq	1.33E-3	4.69E-6	2.11E-4	1.55E-3	1.45E-4	6.79E-4	1.59E-6	7.19E-4	3.09E-3
ADP-f	MJ	1.03E+3	2.79E+0	8.42E+1	1.12E+3	8.58E+1	5.44E+2	4.83E+0	1.60E+3	3.36E+3
WDP	m3 depriv.	1.24E+1	9.99E-3	4.80E+1	6.05E+1	2.63E-1	1.07E+1	2.41E-2	6.36E+1	1.35E+2
PM	disease inc.	3.26E-6	1.66E-8	3.80E-7	3.66E-6	5.04E-7	2.82E-6	3.32E-8	2.27E-6	9.30E-6
IR	kBq U-235 eq	8.10E+0	1.17E-2	2.27E-1	8.33E+0	3.75E-1	1.64E+0	2.25E-2	1.59E+0	1.20E+1
ETP-fw	CTUe	1.80E+3	2.49E+0	2.07E+2	2.01E+3	6.96E+1	6.18E+2	4.25E+0	3.61E+2	3.06E+3
HTP-c	CTUh	3.47E-8	8.07E-11	7.68E-9	4.25E-8	2.48E-9	7.44E-8	1.19E-10	1.64E-8	1.36E-7
HTP-nc	CTUh	8.77E-7	2.72E-9	1.98E-7	1.08E-6	8.30E-8	9.30E-7	2.71E-9	4.34E-7	2.53E-6
SQP	Pt	4.30E+2	2.42E+0	8.10E+0	4.41E+2	7.34E+1	4.35E+2	1.24E+1	6.02E+1	1.02E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.80E+2	3.49E-2	4.47E+2	6.27E+2	1.23E+0	2.69E+1	1.90E-1	4.61E+1	7.01E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.80E+2	3.49E-2	4.47E+2	6.27E+2	1.23E+0	2.69E+1	1.90E-1	4.61E+1	7.01E+2
PENRE	MJ	1.09E+3	2.96E+0	9.00E+1	1.18E+3	9.10E+1	5.80E+2	5.12E+0	1.67E+3	3.53E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.09E+3	2.96E+0	9.00E+1	1.18E+3	9.10E+1	5.80E+2	5.12E+0	1.67E+3	3.53E+3
PET	MJ	1.27E+3	3.00E+0	5.37E+2	1.81E+3	9.23E+1	6.07E+2	5.31E+0	1.72E+3	4.23E+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	8.26E-1	3.40E-4	1.14E+0	1.97E+0	9.70E-3	3.14E-1	5.96E-3	9.26E-1	3.22E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.97E-4	7.07E-6	1.36E-4	1.04E-3	2.19E-4	8.87E-4	5.81E-6	-1.24E-3	9.10E-4
NHWD	kg	9.82E+0	1.77E-1	1.71E-1	1.02E+1	5.32E+0	2.68E+1	2.12E+1	2.13E+0	6.56E+1
RWD	kg	6.71E-3	1.83E-5	3.25E-4	7.05E-3	5.83E-4	2.08E-3	3.15E-5	1.24E-3	1.10E-2
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