

Environmental Profile

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

Ecochain v3.5.64



Product: 3017947 - Prot.Pipe BK 160x14,6 L=100 coil
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
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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	2.31E+2	5.85E-1	2.74E+1	2.59E+2	1.76E+1	5.70E+2	9.70E+0	1.22E+1	8.69E+2
GWP-f	kg CO2 eq	1.84E+2	5.85E-1	2.25E+1	2.07E+2	1.75E+1	5.71E+2	9.71E+0	1.09E+1	8.16E+2
GWP-b	kg CO2 eq	4.65E+1	2.70E-4	2.32E+0	4.88E+1	1.07E-2	-7.02E-1	7.28E-3	1.29E+0	4.94E+1
GWP-luluc	kg CO2 eq	3.45E-1	2.14E-4	2.61E+0	2.95E+0	6.21E-3	9.86E-2	1.41E-4	7.16E-2	3.13E+0
ODP	kg CFC11 eq	1.58E-5	1.29E-7	2.96E-6	1.89E-5	4.04E-6	1.28E-5	2.07E-7	-1.93E-5	1.66E-5
AP	mol H+ eq	1.01E+0	3.39E-3	1.33E-1	1.15E+0	9.99E-2	5.39E-1	4.96E-3	7.55E-1	2.55E+0
EP-fw	kg P eq	1.62E-2	5.90E-6	5.11E-4	1.67E-2	1.44E-4	2.84E-3	6.48E-6	4.11E-3	2.38E-2
EP-m	kg N eq	1.60E-1	1.20E-3	2.74E-2	1.88E-1	3.58E-2	1.57E-1	3.49E-3	1.01E-1	4.85E-1
EP-T	mol N eq	1.68E+0	1.32E-2	2.76E-1	1.97E+0	3.94E-1	1.73E+0	2.01E-2	1.14E+0	5.25E+0
POCP	kg NMVOC eq	4.28E-1	3.76E-3	7.96E-2	5.11E-1	1.13E-1	5.46E-1	7.88E-3	6.56E-1	1.83E+0
ADP-mm	kg Sb eq	4.18E-3	1.48E-5	6.63E-4	4.86E-3	4.54E-4	2.13E-3	4.99E-6	2.26E-3	9.71E-3
ADP-f	MJ	3.26E+3	8.82E+0	2.65E+2	3.53E+3	2.69E+2	1.71E+3	1.52E+1	5.02E+3	1.06E+4
WDP	m3 depriv.	3.95E+1	3.15E-2	1.51E+2	1.90E+2	8.26E-1	3.36E+1	7.58E-2	2.00E+2	4.25E+2
PM	disease inc.	1.03E-5	5.25E-8	1.19E-6	1.15E-5	1.58E-6	8.87E-6	1.04E-7	7.14E-6	2.92E-5
IR	kBq U-235 eq	2.54E+1	3.69E-2	7.12E-1	2.62E+1	1.18E+0	5.15E+0	7.05E-2	5.00E+0	3.76E+1
ETP-fw	CTUe	5.67E+3	7.86E+0	6.49E+2	6.33E+3	2.19E+2	1.94E+3	1.34E+1	1.13E+3	9.63E+3
HTP-c	CTUh	1.09E-7	2.55E-10	2.41E-8	1.34E-7	7.78E-9	2.34E-7	3.73E-10	5.16E-8	4.27E-7
HTP-nc	CTUh	2.76E-6	8.60E-9	6.22E-7	3.39E-6	2.61E-7	2.92E-6	8.52E-9	1.36E-6	7.94E-6
SQP	Pt	1.35E+3	7.65E+0	2.55E+1	1.39E+3	2.30E+2	1.37E+3	3.89E+1	1.89E+2	3.21E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.65E+2	1.10E-1	1.41E+3	1.97E+3	3.86E+0	8.44E+1	5.96E-1	1.45E+2	2.20E+3
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.65E+2	1.10E-1	1.41E+3	1.97E+3	3.86E+0	8.44E+1	5.96E-1	1.45E+2	2.20E+3
PENRE	MJ	3.44E+3	9.36E+0	2.83E+2	3.73E+3	2.86E+2	1.82E+3	1.61E+1	5.24E+3	1.11E+4
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.44E+3	9.36E+0	2.83E+2	3.73E+3	2.86E+2	1.82E+3	1.61E+1	5.24E+3	1.11E+4
PET	MJ	4.00E+3	9.47E+0	1.69E+3	5.70E+3	2.90E+2	1.91E+3	1.67E+1	5.38E+3	1.33E+4
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	2.60E+0	1.07E-3	3.59E+0	6.19E+0	3.05E-2	9.87E-1	1.87E-2	2.91E+0	1.01E+1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.82E-3	2.23E-5	4.28E-4	3.28E-3	6.89E-4	2.79E-3	1.82E-5	-3.91E-3	2.86E-3
NHWD	kg	3.09E+1	5.59E-1	5.37E-1	3.20E+1	1.67E+1	8.40E+1	6.67E+1	6.68E+0	2.06E+2
RWD	kg	2.11E-2	5.79E-5	1.02E-3	2.22E-2	1.83E-3	6.53E-3	9.90E-5	3.88E-3	3.45E-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



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