

Environmental Profile

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

Ecochain v3.5.80



Product: 3044801 - EK PPR Pipe GY 50x4,6 PN10 L=4
 Unit: 1 piece
 Manufacturer: Wavin - CZ - Horni Pocernice
 Location: Czechia
 Address: Do Čertous 2659
 193 00 Horní Počernice
 Czech Republic

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 04-10-2022
 End of validity: 04-10-2027
 Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

Use the Ekoplastik System when you prefer an all-plastic welded system or when you need pipes with larger diameters. The Ekoplastik system offers a maximum pipe diameter of 250 mm. Join pipes and fittings using a homogenous weld for secure and permanent connections.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - CZ - Horni Pocernice (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	☑	☑	☑	☑									

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 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.39E+0	5.92E-1	8.23E-2	6.07E+0	6.86E-2	2.11E+0	3.23E-2	-3.26E+0	5.02E+0
GWP-f	kg CO2 eq	5.37E+0	5.91E-1	6.69E-2	6.03E+0	6.85E-2	2.11E+0	3.23E-2	-3.25E+0	5.00E+0
GWP-b	kg CO2 eq	2.04E-2	3.59E-4	1.41E-2	3.48E-2	4.16E-5	-2.75E-3	2.81E-5	-1.12E-2	2.10E-2
GWP-luluc	kg CO2 eq	1.50E-3	2.09E-4	1.34E-3	3.05E-3	2.43E-5	3.86E-4	5.56E-7	-6.19E-4	2.84E-3
ODP	kg CFC11 eq	1.02E-7	1.36E-7	8.39E-8	3.22E-7	1.58E-8	5.03E-8	8.11E-10	-1.24E-7	2.65E-7
AP	mol H+ eq	1.95E-2	3.37E-3	7.38E-4	2.36E-2	3.90E-4	2.12E-3	1.94E-5	-8.99E-3	1.71E-2
EP-fw	kg P eq	8.20E-5	4.86E-6	3.35E-6	9.02E-5	5.64E-7	1.11E-5	2.54E-8	-3.52E-5	6.67E-5
EP-m	kg N eq	3.22E-3	1.20E-3	1.43E-4	4.57E-3	1.40E-4	6.18E-4	1.25E-5	-1.59E-3	3.74E-3
EP-T	mol N eq	3.68E-2	1.33E-2	1.67E-3	5.17E-2	1.54E-3	6.81E-3	7.86E-5	-1.76E-2	4.25E-2
POCP	kg NMVOC eq	1.67E-2	3.80E-3	3.69E-4	2.08E-2	4.40E-4	2.15E-3	2.95E-5	-8.13E-3	1.53E-2
ADP-mm	kg Sb eq	9.09E-5	1.53E-5	6.48E-6	1.13E-4	1.77E-6	8.36E-6	1.96E-8	-2.11E-5	1.02E-4
ADP-f	MJ	1.89E+2	9.07E+0	2.15E+1	2.20E+2	1.05E+0	6.70E+0	5.92E-2	-1.02E+2	1.26E+2
WDP	m3 depriv.	3.79E+0	2.78E-2	3.42E-1	4.16E+0	3.23E-3	1.31E-1	3.21E-4	-1.74E+0	2.55E+0
PM	disease inc.	1.70E-7	5.34E-8	5.43E-9	2.29E-7	6.19E-9	3.48E-8	4.07E-10	-7.49E-8	1.95E-7
IR	kBq U-235 eq	9.90E-2	3.97E-2	2.55E-1	3.93E-1	4.60E-3	2.02E-2	2.74E-4	-4.70E-2	3.71E-1
ETP-fw	CTUe	3.07E+1	7.37E+0	7.36E+0	4.54E+1	8.54E-1	7.57E+0	4.96E-2	-1.25E+1	4.14E+1
HTP-c	CTUh	1.32E-9	2.62E-10	1.40E-10	1.72E-9	3.04E-11	9.37E-10	1.46E-12	-5.34E-10	2.16E-9
HTP-nc	CTUh	3.59E-8	8.78E-9	4.78E-9	4.94E-8	1.02E-9	1.14E-8	3.20E-11	-1.51E-8	4.68E-8
SQP	Pt	7.76E+0	7.76E+0	5.87E+0	2.14E+1	9.00E-1	5.35E+0	1.52E-1	-2.72E+0	2.51E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.83E+0	1.30E-1	3.07E+0	6.03E+0	1.51E-2	3.30E-1	2.28E-3	-1.25E+0	5.13E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.83E+0	1.30E-1	3.07E+0	6.03E+0	1.51E-2	3.30E-1	2.28E-3	-1.25E+0	5.13E+0
PENRE	MJ	2.03E+2	9.63E+0	2.16E+1	2.34E+2	1.12E+0	7.14E+0	6.28E-2	-1.09E+2	1.33E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.03E+2	9.63E+0	2.16E+1	2.34E+2	1.12E+0	7.14E+0	6.28E-2	-1.09E+2	1.33E+2
PET	MJ	2.06E+2	9.76E+0	2.46E+1	2.40E+2	1.13E+0	7.47E+0	6.51E-2	-1.11E+2	1.38E+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	5.80E-2	1.03E-3	1.13E-2	7.03E-2	1.19E-4	3.88E-3	7.29E-5	-2.61E-2	4.83E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.56E-5	2.32E-5	1.77E-7	4.90E-5	2.69E-6	1.09E-5	7.15E-8	-2.44E-5	3.83E-5
NHWD	kg	2.35E-1	5.62E-1	9.99E-4	7.99E-1	6.52E-2	3.34E-1	2.61E-1	-7.77E-2	1.38E+0
RWD	kg	8.57E-5	6.17E-5	2.39E-7	1.48E-4	7.16E-6	2.56E-5	3.86E-7	-4.24E-5	1.38E-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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