Environmental Profile

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

Ecochain v3.5.80

Product:	3022993 - EK PPR Pipe GY 50x8,3 PN20 L=4
Unit:	1 piece
Manufacturer:	Wavin - CZ - Horni Pocernice
Location:	Czechia
Address:	Do Čertous 2659 193 00 Horní Počernice Czech Republic

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.

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.

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	MND	MND	MND	MND	MND	MND	MND	MND	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]

Statement of Confidentiality

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.70E+0	9.64E-1	1.34E-1	9.80E+0	1.12E-1	3.36E+0	5.27E-2	-5.26E+0	8.07E+0
GWP-f	kg CO2 eq	8.67E+0	9.63E-1	1.09E-1	9.74E+0	1.12E-1	3.36E+0	5.27E-2	-5.24E+0	8.03E+0
GWP-b	kg CO2 eq	3.55E-2	5.85E-4	2.29E-2	5.90E-2	6.79E-5	-4.48E-3	4.58E-5	-1.82E-2	3.65E-2
GWP-luluc	kg CO2 eq	2.37E-3	3.41E-4	2.19E-3	4.91E-3	3.95E-5	6.28E-4	9.06E-7	-1.01E-3	4.57E-3
ODP	kg CFC11 eq	1.64E-7	2.22E-7	1.37E-7	5.22E-7	2.58E-8	8.18E-8	1.32E-9	-1.98E-7	4.34E-7
AP	mol H+ eq	3.14E-2	5.49E-3	1.20E-3	3.81E-2	6.37E-4	3.44E-3	3.16E-5	-1.46E-2	2.76E-2
EP-fw	kg P eq	1.31E-4	7.93E-6	5.46E-6	1.44E-4	9.19E-7	1.81E-5	4.14E-8	-5.72E-5	1.06E-4
EP-m	kg N eq	5.18E-3	1.96E-3	2.32E-4	7.37E-3	2.28E-4	1.00E-3	2.04E-5	-2.59E-3	6.04E-3
EP-T	mol N eq	5.91E-2	2.16E-2	2.72E-3	8.35E-2	2.51E-3	1.10E-2	1.28E-4	-2.86E-2	6.85E-2
POCP	kg NMVOC eq	2.68E-2	6.19E-3	6.01E-4	3.36E-2	7.17E-4	3.49E-3	4.81E-5	-1.32E-2	2.47E-2
ADP-mm	kg Sb eq	1.47E-4	2.49E-5	1.06E-5	1.83E-4	2.89E-6	1.36E-5	3.19E-8	-3.44E-5	1.65E-4
ADP-f	MJ	3.06E+2	1.48E+1	3.51E+1	3.55E+2	1.72E+0	1.09E+1	9.65E-2	-1.65E+2	2.04E+2
WDP	m3 depriv.	6.10E+0	4.54E-2	5.58E-1	6.71E+0	5.26E-3	2.14E-1	5.23E-4	-2.84E+0	4.09E+0
PM	disease inc.	2.74E-7	8.70E-8	8.85E-9	3.70E-7	1.01E-8	5.67E-8	6.64E-10	-1.22E-7	3.15E-7
IR	kBq U-235 eq	1.59E-1	6.46E-2	4.15E-1	6.39E-1	7.50E-3	3.29E-2	4.47E-4	-7.63E-2	6.03E-1
ETP-fw	CTUe	4.89E+1	1.20E+1	1.20E+1	7.29E+1	1.39E+0	1.23E+1	8.08E-2	-2.03E+1	6.64E+1
HTP-c	CTUh	2.12E-9	4.27E-10	2.28E-10	2.78E-9	4.96E-11	1.52E-9	2.39E-12	-8.68E-10	3.48E-9
HTP-nc	CTUh	5.78E-8	1.43E-8	7.79E-9	7.99E-8	1.66E-9	1.85E-8	5.22E-11	-2.45E-8	7.55E-8
SQP	Pt	1.23E+1	1.27E+1	9.57E+0	3.45E+1	1.47E+0	8.71E+0	2.48E-1	-4.41E+0	4.05E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.52E+0	2.12E-1	5.01E+0	9.73E+0	2.46E-2	5.38E-1	3.72E-3	-2.03E+0	8.27E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.52E+0	2.12E-1	5.01E+0	9.73E+0	2.46E-2	5.38E-1	3.72E-3	-2.03E+0	8.27E+0
PENRE	MJ	3.28E+2	1.57E+1	3.51E+1	3.79E+2	1.82E+0	1.16E+1	1.02E-1	-1.77E+2	2.15E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.28E+2	1.57E+1	3.51E+1	3.79E+2	1.82E+0	1.16E+1	1.02E-1	-1.77E+2	2.15E+2
PET	MJ	3.32E+2	1.59E+1	4.02E+1	3.89E+2	1.85E+0	1.22E+1	1.06E-1	-1.79E+2	2.23E+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	9.30E-2	1.67E-3	1.85E-2	1.13E-1	1.94E-4	6.30E-3	1.19E-4	-4.25E-2	7.73E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.14E-5	3.78E-5	2.88E-7	7.95E-5	4.39E-6	1.78E-5	1.17E-7	-3.88E-5	6.29E-5
NHWD	kg	3.77E-1	9.17E-1	1.63E-3	1.29E+0	1.06E-1	5.40E-1	4.25E-1	-1.26E-1	2.24E+0
RWD	kg	1.38E-4	1.01E-4	3.90E-7	2.39E-4	1.17E-5	4.17E-5	6.30E-7	-6.87E-5	2.24E-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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