Environmental Profile

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

Ecochain v3.5.80

Product:	3022996 - EK PPR Pipe GY 90x15,0 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.74E+1	3.02E+0	4.33E-1	3.08E+1	3.50E-1	1.06E+1	1.65E-1	-1.65E+1	2.54E+1
GWP-f	kg CO2 eq	2.73E+1	3.02E+0	3.52E-1	3.06E+1	3.50E-1	1.06E+1	1.65E-1	-1.65E+1	2.53E+1
GWP-b	kg CO2 eq	1.08E-1	1.83E-3	7.40E-2	1.84E-1	2.12E-4	-1.40E-2	1.43E-4	-5.70E-2	1.13E-1
GWP-luluc	kg CO2 eq	7.54E-3	1.07E-3	7.08E-3	1.57E-2	1.24E-4	1.97E-3	2.84E-6	-3.15E-3	1.46E-2
ODP	kg CFC11 eq	5.17E-7	6.95E-7	4.42E-7	1.65E-6	8.06E-8	2.56E-7	4.14E-9	-6.26E-7	1.37E-6
AP	mol H+ eq	9.89E-2	1.72E-2	3.89E-3	1.20E-1	1.99E-3	1.08E-2	9.88E-5	-4.58E-2	8.71E-2
EP-fw	kg P eq	4.14E-4	2.48E-5	1.76E-5	4.56E-4	2.88E-6	5.68E-5	1.30E-7	-1.79E-4	3.37E-4
EP-m	kg N eq	1.63E-2	6.15E-3	7.51E-4	2.32E-2	7.13E-4	3.15E-3	6.40E-5	-8.12E-3	1.90E-2
EP-T	mol N eq	1.87E-1	6.78E-2	8.80E-3	2.63E-1	7.86E-3	3.47E-2	4.01E-4	-8.99E-2	2.16E-1
POCP	kg NMVOC eq	8.45E-2	1.94E-2	1.94E-3	1.06E-1	2.25E-3	1.10E-2	1.50E-4	-4.14E-2	7.78E-2
ADP-mm	kg Sb eq	4.68E-4	7.80E-5	3.41E-5	5.80E-4	9.05E-6	4.26E-5	9.99E-8	-1.08E-4	5.24E-4
ADP-f	MJ	9.60E+2	4.63E+1	1.13E+2	1.12E+3	5.37E+0	3.42E+1	3.02E-1	-5.17E+2	6.43E+2
WDP	m3 depriv.	1.92E+1	1.42E-1	1.80E+0	2.12E+1	1.65E-2	6.70E-1	1.64E-3	-8.89E+0	1.30E+1
PM	disease inc.	8.63E-7	2.72E-7	2.86E-8	1.16E-6	3.16E-8	1.78E-7	2.08E-9	-3.82E-7	9.93E-7
IR	kBq U-235 eq	5.01E-1	2.02E-1	1.34E+0	2.04E+0	2.35E-2	1.03E-1	1.40E-3	-2.39E-1	1.93E+0
ETP-fw	CTUe	1.55E+2	3.76E+1	3.88E+1	2.31E+2	4.36E+0	3.86E+1	2.53E-1	-6.36E+1	2.11E+2
HTP-c	CTUh	6.72E-9	1.34E-9	7.37E-10	8.79E-9	1.55E-10	4.76E-9	7.47E-12	-2.72E-9	1.10E-8
HTP-nc	CTUh	1.82E-7	4.48E-8	2.52E-8	2.52E-7	5.20E-9	5.79E-8	1.63E-10	-7.69E-8	2.39E-7
SQP	Pt	3.92E+1	3.96E+1	3.09E+1	1.10E+2	4.59E+0	2.73E+1	7.75E-1	-1.39E+1	1.29E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.43E+1	6.64E-1	1.62E+1	3.11E+1	7.71E-2	1.68E+0	1.16E-2	-6.38E+0	2.65E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.43E+1	6.64E-1	1.62E+1	3.11E+1	7.71E-2	1.68E+0	1.16E-2	-6.38E+0	2.65E+1
PENRE	MJ	1.03E+3	4.92E+1	1.14E+2	1.19E+3	5.70E+0	3.64E+1	3.21E-1	-5.57E+2	6.79E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.03E+3	4.92E+1	1.14E+2	1.19E+3	5.70E+0	3.64E+1	3.21E-1	-5.57E+2	6.79E+2
PET	MJ	1.04E+3	4.98E+1	1.30E+2	1.22E+3	5.78E+0	3.81E+1	3.32E-1	-5.63E+2	7.05E+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	2.93E-1	5.24E-3	5.96E-2	3.58E-1	6.08E-4	1.98E-2	3.72E-4	-1.33E-1	2.46E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.31E-4	1.18E-4	9.31E-7	2.50E-4	1.37E-5	5.57E-5	3.65E-7	-1.23E-4	1.97E-4
NHWD	kg	1.20E+0	2.87E+0	5.26E-3	4.07E+0	3.33E-1	1.70E+0	1.33E+0	-3.96E-1	7.04E+0
RWD	kg	4.34E-4	3.15E-4	1.26E-6	7.50E-4	3.65E-5	1.31E-4	1.97E-6	-2.16E-4	7.04E-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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