Environmental Profile

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

Ecochain v3.5.80

Product:	3022992 - EK PPR Pipe GY 40x6,7 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	5.62E+0	6.16E-1	8.65E-2	6.32E+0	7.22E-2	2.17E+0	3.40E-2	-3.40E+0	5.20E+0
GWP-f	kg CO2 eq	5.60E+0	6.15E-1	7.03E-2	6.28E+0	7.21E-2	2.17E+0	3.40E-2	-3.38E+0	5.18E+0
GWP-b	kg CO2 eq	2.28E-2	3.53E-4	1.48E-2	3.80E-2	4.38E-5	-2.89E-3	2.95E-5	-1.17E-2	2.34E-2
GWP-luluc	kg CO2 eq	1.53E-3	2.24E-4	1.41E-3	3.17E-3	2.55E-5	4.05E-4	5.85E-7	-6.49E-4	2.95E-3
ODP	kg CFC11 eq	1.06E-7	1.41E-7	8.82E-8	3.35E-7	1.66E-8	5.28E-8	8.53E-10	-1.28E-7	2.77E-7
AP	mol H+ eq	2.03E-2	4.16E-3	7.76E-4	2.52E-2	4.11E-4	2.22E-3	2.04E-5	-9.43E-3	1.84E-2
EP-fw	kg P eq	8.45E-5	4.95E-6	3.52E-6	9.29E-5	5.93E-7	1.17E-5	2.67E-8	-3.69E-5	6.83E-5
EP-m	kg N eq	3.34E-3	1.40E-3	1.50E-4	4.89E-3	1.47E-4	6.47E-4	1.32E-5	-1.67E-3	4.03E-3
EP-T	mol N eq	3.82E-2	1.55E-2	1.76E-3	5.54E-2	1.62E-3	7.13E-3	8.26E-5	-1.85E-2	4.58E-2
POCP	kg NMVOC eq	1.73E-2	4.36E-3	3.88E-4	2.21E-2	4.63E-4	2.25E-3	3.10E-5	-8.52E-3	1.63E-2
ADP-mm	kg Sb eq	9.52E-5	1.54E-5	6.81E-6	1.17E-4	1.87E-6	8.78E-6	2.06E-8	-2.22E-5	1.06E-4
ADP-f	MJ	1.97E+2	9.38E+0	2.26E+1	2.29E+2	1.11E+0	7.04E+0	6.23E-2	-1.06E+2	1.31E+2
WDP	m3 depriv.	3.94E+0	2.82E-2	3.60E-1	4.33E+0	3.40E-3	1.38E-1	3.38E-4	-1.83E+0	2.64E+0
PM	disease inc.	1.77E-7	5.41E-8	5.71E-9	2.37E-7	6.51E-9	3.66E-8	4.28E-10	-7.87E-8	2.01E-7
IR	kBq U-235 eq	1.03E-1	4.10E-2	2.68E-1	4.11E-1	4.84E-3	2.12E-2	2.88E-4	-4.92E-2	3.89E-1
ETP-fw	CTUe	3.16E+1	7.56E+0	7.74E+0	4.69E+1	8.99E-1	7.95E+0	5.21E-2	-1.31E+1	4.27E+1
HTP-c	CTUh	1.37E-9	2.75E-10	1.47E-10	1.79E-9	3.20E-11	9.79E-10	1.54E-12	-5.60E-10	2.25E-9
HTP-nc	CTUh	3.73E-8	8.93E-9	5.02E-9	5.13E-8	1.07E-9	1.19E-8	3.37E-11	-1.58E-8	4.85E-8
SQP	Pt	7.93E+0	7.80E+0	6.18E+0	2.19E+1	9.47E-1	5.62E+0	1.60E-1	-2.85E+0	2.58E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.92E+0	1.32E-1	3.23E+0	6.28E+0	1.59E-2	3.47E-1	2.40E-3	-1.31E+0	5.33E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.92E+0	1.32E-1	3.23E+0	6.28E+0	1.59E-2	3.47E-1	2.40E-3	-1.31E+0	5.33E+0
PENRE	MJ	2.12E+2	9.96E+0	2.27E+1	2.44E+2	1.17E+0	7.50E+0	6.61E-2	-1.15E+2	1.39E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.12E+2	9.96E+0	2.27E+1	2.44E+2	1.17E+0	7.50E+0	6.61E-2	-1.15E+2	1.39E+2
PET	MJ	2.15E+2	1.01E+1	2.59E+1	2.51E+2	1.19E+0	7.85E+0	6.85E-2	-1.16E+2	1.44E+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	6.00E-2	1.04E-3	1.19E-2	7.30E-2	1.25E-4	4.07E-3	7.67E-5	-2.74E-2	4.99E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.67E-5	2.35E-5	1.86E-7	5.04E-5	2.83E-6	1.15E-5	7.53E-8	-2.51E-5	3.96E-5
NHWD	kg	2.43E-1	5.63E-1	1.05E-3	8.07E-1	6.86E-2	3.49E-1	2.74E-1	-8.15E-2	1.42E+0
RWD	kg	8.89E-5	6.38E-5	2.52E-7	1.53E-4	7.53E-6	2.69E-5	4.06E-7	-4.44E-5	1.43E-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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