Environmental Profile

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

Ecochain v3.5.80

Product:	3083451 - EK PP-RCT ELBOW 90° GN 50
Unit:	1 piece
Manufacturer:	Wavin - CZ - Kostelec - Verified

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:	NMD Bepalingsmethode 1.1 (2022)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	27-01-2023
End of validity:	27-01-2028
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 - Kostelec - 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

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

ECI = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO2-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO2-eq]; **EP** = Eutrophication potential [kg PO4 3−-eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **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 SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.02	0	0	0.03	0	0.01	0	-0.01	0.03
ADPE	kg Sb-eq	4.08E-6	3.59E-7	1.63E-6	6.07E-6	8.51E-8	4.16E-7	9.41E-10	-1.06E-6	5.52E-6
ADPF	kg Sb-eq	4.36E-3	1.01E-4	1.23E-4	4.58E-3	2.40E-5	1.59E-4	1.31E-6	-2.39E-3	2.38E-3
GWP	kg CO2-eq	2.53E-1	1.38E-2	2.22E-2	2.89E-1	3.26E-3	1.01E-1	1.32E-3	-1.54E-1	2.41E-1
ODP	kg CFC-11-eq	5.99E-9	2.56E-9	3.81E-8	4.66E-8	6.05E-10	2.12E-9	3.14E-11	-6.15E-9	4.32E-8
POCP	kg ethene-eq	2.09E-4	8.33E-6	1.60E-5	2.34E-4	1.96E-6	1.60E-5	3.01E-7	-1.02E-4	1.50E-4
AP	kg SO2-eq	8.02E-4	6.08E-5	1.53E-4	1.02E-3	1.40E-5	8.14E-5	6.92E-7	-3.85E-4	7.26E-4
EP	kg PO4 3−-eq	7.77E-5	1.20E-5	1.96E-5	1.09E-4	2.81E-6	1.44E-5	3.01E-7	-4.01E-5	8.67E-5
HTP	kg 1,4-DB-eq	4.08E-2	5.91E-3	2.70E-2	7.37E-2	1.40E-3	3.24E-2	1.04E-4	-1.96E-2	8.79E-2
FAETP	kg 1,4-DB-eq	1.19E-3	1.73E-4	9.74E-4	2.33E-3	4.09E-5	7.26E-4	1.12E-4	-5.47E-4	2.67E-3
MAETP	kg 1,4-DB-eq	2.74E+0	6.17E-1	2.71E+0	6.07E+0	1.46E-1	1.66E+0	1.12E-1	-1.20E+0	6.79E+0
TETP	kg 1,4-DB-eq	1.86E-4	2.09E-5	1.41E-3	1.62E-3	4.95E-6	9.92E-5	1.69E-7	-1.37E-4	1.58E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.65E-1	1.39E-2	2.63E-2	3.05E-1	3.29E-3	1.05E-1	1.55E-3	-1.53E-1	2.62E-1
GWP-f	kg CO2 eq	2.64E-1	1.39E-2	2.12E-2	2.99E-1	3.29E-3	1.02E-1	1.55E-3	-1.60E-1	2.46E-1
GWP-b	kg CO2 eq	1.07E-3	8.39E-6	4.74E-3	5.82E-3	2.00E-6	2.99E-3	1.35E-6	6.60E-3	1.54E-2
GWP-luluc	kg CO2 eq	1.12E-4	4.94E-6	3.34E-4	4.50E-4	1.16E-6	1.87E-5	2.68E-8	-7.94E-5	3.91E-4
ODP	kg CFC11 eq	5.78E-9	3.20E-9	2.12E-8	3.02E-8	7.58E-10	2.51E-9	3.89E-11	-6.48E-9	2.71E-8
AP	mol H+ eq	9.69E-4	8.09E-5	1.93E-4	1.24E-3	1.87E-5	1.05E-4	9.30E-7	-4.65E-4	9.03E-4
EP-fw	kg P eq	4.36E-6	1.14E-7	7.02E-7	5.18E-6	2.71E-8	5.42E-7	1.22E-9	-2.31E-6	3.44E-6
EP-m	kg N eq	1.66E-4	2.87E-5	3.58E-5	2.31E-4	6.71E-6	3.10E-5	6.01E-7	-8.43E-5	1.85E-4
EP-T	mol N eq	1.86E-3	3.17E-4	4.43E-4	2.62E-3	7.39E-5	3.41E-4	3.77E-6	-9.37E-4	2.10E-3
POCP	kg NMVOC eq	8.22E-4	9.04E-5	1.03E-4	1.01E-3	2.11E-5	1.07E-4	1.42E-6	-4.12E-4	7.33E-4
ADP-mm	kg Sb eq	4.08E-6	3.59E-7	1.63E-6	6.07E-6	8.51E-8	4.16E-7	9.41E-10	-1.06E-6	5.51E-6
ADP-f	MJ	9.13E+0	2.13E-1	5.38E+0	1.47E+1	5.05E-2	3.28E-1	2.84E-3	-4.94E+0	1.02E+1
WDP	m3 depriv.	1.84E-1	6.53E-4	9.38E-2	2.79E-1	1.55E-4	6.35E-3	1.59E-5	-9.39E-2	1.91E-1
PM	disease inc.	8.65E-9	1.25E-9	1.60E-9	1.15E-8	2.97E-10	1.72E-9	1.96E-11	-4.27E-9	9.27E-9
IR	kBq U-235 eq	5.05E-3	9.33E-4	6.29E-2	6.89E-2	2.21E-4	9.98E-4	1.32E-5	-2.69E-3	6.75E-2
ETP-fw	CTUe	2.36E+0	1.73E-1	1.80E+0	4.33E+0	4.10E-2	3.76E-1	2.38E-3	-1.14E+0	3.61E+0
HTP-c	CTUh	6.48E-11	6.18E-12	3.89E-11	1.10E-10	1.46E-12	4.62E-11	7.06E-14	-2.98E-11	1.28E-10
HTP-nc	CTUh	1.80E-9	2.06E-10	1.23E-9	3.24E-9	4.89E-11	5.58E-10	1.54E-12	-8.65E-10	2.98E-9
SQP	Pt	6.36E-1	1.82E-1	1.47E+0	2.29E+0	4.32E-2	2.61E-1	7.29E-3	-1.41E+0	1.19E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.95E-1	3.05E-3	7.60E-1	9.58E-1	7.25E-4	1.60E-2	1.09E-4	-2.92E-1	6.83E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.95E-1	3.05E-3	7.60E-1	9.58E-1	7.25E-4	1.60E-2	1.09E-4	-2.92E-1	6.83E-1
PENRE	MJ	9.80E+0	2.27E-1	5.39E+0	1.54E+1	5.36E-2	3.50E-1	3.02E-3	-5.32E+0	1.05E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.80E+0	2.27E-1	5.39E+0	1.54E+1	5.36E-2	3.50E-1	3.02E-3	-5.32E+0	1.05E+1
PET	MJ	9.99E+0	2.30E-1	6.15E+0	1.64E+1	5.43E-2	3.66E-1	3.13E-3	-5.61E+0	1.12E+1
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	2.88E-3	2.41E-5	3.01E-3	5.91E-3	5.72E-6	1.89E-4	3.50E-6	-1.52E-3	4.59E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.29E-6	5.44E-7	1.05E-7	1.94E-6	1.29E-7	5.42E-7	3.44E-9	-1.26E-6	1.36E-6
NHWD	kg	1.18E-2	1.32E-2	3.00E-3	2.80E-2	3.13E-3	1.63E-2	1.25E-2	-4.29E-3	5.57E-2
RWD	kg	4.42E-6	1.45E-6	1.57E-7	6.03E-6	3.43E-7	1.27E-6	1.85E-8	-2.45E-6	5.21E-6
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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