Environmental Profile

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

Ecochain v3.5.80

Product:	3079511 - EK PP-RCT ELBOW 45° GY 75
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	0.05	0	0.01	0.06	0	0.02	0	-0.03	0.06
ADPE	kg Sb-eq	8.97E-6	8.95E-7	3.74E-6	1.36E-5	1.86E-7	8.85E-7	2.05E-9	-2.23E-6	1.24E-5
ADPF	kg Sb-eq	9.82E-3	2.52E-4	2.77E-4	1.03E-2	5.23E-5	3.44E-4	2.87E-6	-5.30E-3	5.44E-3
GWP	kg CO2-eq	5.66E-1	3.43E-2	5.01E-2	6.51E-1	7.13E-3	2.44E-1	2.89E-3	-3.44E-1	5.61E-1
ODP	kg CFC-11-eq	1.22E-8	6.36E-9	8.72E-8	1.06E-7	1.32E-9	4.52E-9	6.85E-11	-1.37E-8	9.79E-8
POCP	kg ethene-eq	4.81E-4	2.06E-5	3.64E-5	5.38E-4	4.28E-6	3.43E-5	6.58E-7	-2.19E-4	3.58E-4
AP	kg SO2-eq	1.80E-3	1.48E-4	3.49E-4	2.30E-3	3.07E-5	1.75E-4	1.51E-6	-7.97E-4	1.71E-3
EP	kg PO4 3−-eq	1.65E-4	2.95E-5	4.47E-5	2.39E-4	6.13E-6	3.11E-5	6.58E-7	-7.38E-5	2.03E-4
HTP	kg 1,4-DB-eq	9.15E-2	1.47E-2	6.10E-2	1.67E-1	3.05E-3	7.06E-2	2.26E-4	-3.96E-2	2.01E-1
FAETP	kg 1,4-DB-eq	2.19E-3	4.30E-4	2.21E-3	4.83E-3	8.93E-5	1.70E-3	2.45E-4	-7.90E-4	6.07E-3
MAETP	kg 1,4-DB-eq	6.14E+0	1.54E+0	6.18E+0	1.39E+1	3.19E-1	3.73E+0	2.44E-1	-2.39E+0	1.58E+1
TETP	kg 1,4-DB-eq	3.82E-4	5.20E-5	3.23E-3	3.66E-3	1.08E-5	2.16E-4	3.69E-7	-1.62E-4	3.73E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.93E-1	3.46E-2	5.93E-2	6.86E-1	7.19E-3	2.45E-1	3.39E-3	-3.56E-1	5.86E-1
GWP-f	kg CO2 eq	5.91E-1	3.46E-2	4.79E-2	6.74E-1	7.19E-3	2.45E-1	3.39E-3	-3.56E-1	5.73E-1
GWP-b	kg CO2 eq	1.42E-3	2.10E-5	1.07E-2	1.21E-2	4.36E-6	1.72E-4	2.94E-6	-1.28E-4	1.21E-2
GWP-luluc	kg CO2 eq	1.84E-4	1.22E-5	7.65E-4	9.61E-4	2.54E-6	4.06E-5	5.84E-8	-7.30E-5	9.32E-4
ODP	kg CFC11 eq	1.16E-8	7.97E-9	4.86E-8	6.82E-8	1.66E-9	5.35E-9	8.50E-11	-1.46E-8	6.07E-8
AP	mol H+ eq	2.17E-3	1.97E-4	4.41E-4	2.80E-3	4.09E-5	2.27E-4	2.03E-6	-9.60E-4	2.11E-3
EP-fw	kg P eq	9.51E-6	2.85E-7	1.60E-6	1.14E-5	5.91E-8	1.17E-6	2.67E-9	-3.81E-6	8.82E-6
EP-m	kg N eq	3.60E-4	7.05E-5	8.13E-5	5.12E-4	1.46E-5	6.66E-5	1.31E-6	-1.72E-4	4.23E-4
EP-T	mol N eq	4.09E-3	7.77E-4	1.01E-3	5.87E-3	1.61E-4	7.34E-4	8.24E-6	-1.91E-3	4.87E-3
POCP	kg NMVOC eq	1.86E-3	2.22E-4	2.34E-4	2.31E-3	4.61E-5	2.31E-4	3.09E-6	-8.71E-4	1.72E-3
ADP-mm	kg Sb eq	8.97E-6	8.95E-7	3.74E-6	1.36E-5	1.86E-7	8.85E-7	2.05E-9	-2.23E-6	1.24E-5
ADP-f	MJ	2.05E+1	5.31E-1	1.23E+1	3.34E+1	1.10E-1	7.08E-1	6.21E-3	-1.09E+1	2.33E+1
WDP	m3 depriv.	4.18E-1	1.63E-3	2.14E-1	6.33E-1	3.39E-4	1.38E-2	3.42E-5	-1.85E-1	4.62E-1
PM	disease inc.	1.88E-8	3.12E-9	3.62E-9	2.55E-8	6.49E-10	3.70E-9	4.27E-11	-8.01E-9	2.19E-8
IR	kBq U-235 eq	1.12E-2	2.32E-3	1.44E-1	1.58E-1	4.82E-4	2.14E-3	2.87E-5	-5.08E-3	1.55E-1
ETP-fw	CTUe	3.69E+0	4.31E-1	4.12E+0	8.24E+0	8.96E-2	8.05E-1	5.20E-3	-1.41E+0	7.73E+0
HTP-c	CTUh	1.43E-10	1.53E-11	8.85E-11	2.46E-10	3.19E-12	1.02E-10	1.54E-13	-5.78E-11	2.94E-10
HTP-nc	CTUh	3.95E-9	5.14E-10	2.81E-9	7.27E-9	1.07E-10	1.22E-9	3.36E-12	-1.62E-9	6.99E-9
SQP	Pt	9.25E-1	4.54E-1	3.37E+0	4.75E+0	9.44E-2	5.66E-1	1.59E-2	-4.81E-1	4.95E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.36E-1	7.62E-3	1.74E+0	2.08E+0	1.58E-3	3.48E-2	2.39E-4	-1.66E-1	1.96E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.36E-1	7.62E-3	1.74E+0	2.08E+0	1.58E-3	3.48E-2	2.39E-4	-1.66E-1	1.96E+0
PENRE	MJ	2.20E+1	5.64E-1	1.24E+1	3.50E+1	1.17E-1	7.54E-1	6.59E-3	-1.18E+1	2.41E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.20E+1	5.64E-1	1.24E+1	3.50E+1	1.17E-1	7.54E-1	6.59E-3	-1.18E+1	2.41E+1
PET	MJ	2.24E+1	5.71E-1	1.41E+1	3.70E+1	1.19E-1	7.89E-1	6.83E-3	-1.19E+1	2.60E+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	6.57E-3	6.01E-5	6.87E-3	1.35E-2	1.25E-5	4.12E-4	7.64E-6	-2.80E-3	1.11E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.69E-6	1.36E-6	2.26E-7	4.27E-6	2.82E-7	1.16E-6	7.51E-9	-2.86E-6	2.86E-6
NHWD	kg	2.56E-2	3.29E-2	6.45E-3	6.49E-2	6.84E-3	3.62E-2	2.73E-2	-8.34E-3	1.27E-1
RWD	kg	9.62E-6	3.61E-6	3.38E-7	1.36E-5	7.50E-7	2.71E-6	4.05E-8	-4.62E-6	1.25E-5
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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