Environmental Profile

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

Ecochain v3.5.80

Product:	3079605 - EK PP-RCT ELBOW 90° 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	0.07	0.01	0.02	0.09	0	0.03	0	-0.04	0.08
ADPE	kg Sb-eq	1.29E-5	1.26E-6	5.30E-6	1.94E-5	2.73E-7	1.29E-6	3.02E-9	-3.26E-6	1.77E-5
ADPF	kg Sb-eq	1.41E-2	3.54E-4	3.94E-4	1.49E-2	7.69E-5	5.03E-4	4.21E-6	-7.67E-3	7.77E-3
GWP	kg CO2-eq	8.09E-1	4.82E-2	7.12E-2	9.29E-1	1.05E-2	3.39E-1	4.25E-3	-4.93E-1	7.90E-1
ODP	kg CFC-11-eq	1.73E-8	8.93E-9	1.23E-7	1.50E-7	1.94E-9	6.59E-9	1.01E-10	-1.91E-8	1.39E-7
POCP	kg ethene-eq	6.83E-4	2.89E-5	5.17E-5	7.63E-4	6.28E-6	4.99E-5	9.67E-7	-3.20E-4	5.01E-4
AP	kg SO2-eq	2.56E-3	2.07E-4	4.94E-4	3.26E-3	4.51E-5	2.55E-4	2.22E-6	-1.16E-3	2.40E-3
EP	kg PO4 3−-eq	2.33E-4	4.14E-5	6.34E-5	3.38E-4	9.00E-6	4.51E-5	9.67E-7	-1.07E-4	2.86E-4
HTP	kg 1,4-DB-eq	1.29E-1	2.06E-2	8.66E-2	2.36E-1	4.48E-3	1.03E-1	3.32E-4	-5.73E-2	2.86E-1
FAETP	kg 1,4-DB-eq	3.08E-3	6.04E-4	3.13E-3	6.82E-3	1.31E-4	2.38E-3	3.60E-4	-1.14E-3	8.55E-3
MAETP	kg 1,4-DB-eq	8.58E+0	2.16E+0	8.76E+0	1.95E+1	4.69E-1	5.27E+0	3.59E-1	-3.47E+0	2.21E+1
TETP	kg 1,4-DB-eq	5.33E-4	7.30E-5	4.57E-3	5.17E-3	1.59E-5	3.16E-4	5.43E-7	-2.30E-4	5.28E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.48E-1	4.86E-2	8.44E-2	9.81E-1	1.06E-2	3.41E-1	4.97E-3	-5.11E-1	8.26E-1
GWP-f	kg CO2 eq	8.45E-1	4.86E-2	6.81E-2	9.62E-1	1.06E-2	3.41E-1	4.97E-3	-5.10E-1	8.08E-1
GWP-b	kg CO2 eq	2.63E-3	2.95E-5	1.52E-2	1.78E-2	6.41E-6	3.68E-5	4.32E-6	-6.75E-4	1.72E-2
GWP-luluc	kg CO2 eq	2.51E-4	1.72E-5	1.08E-3	1.35E-3	3.74E-6	5.95E-5	8.59E-8	-1.03E-4	1.31E-3
ODP	kg CFC11 eq	1.64E-8	1.12E-8	6.88E-8	9.64E-8	2.43E-9	7.80E-9	1.25E-10	-2.02E-8	8.65E-8
AP	mol H+ eq	3.08E-3	2.77E-4	6.25E-4	3.98E-3	6.01E-5	3.30E-4	2.98E-6	-1.40E-3	2.97E-3
EP-fw	kg P eq	1.32E-5	4.00E-7	2.26E-6	1.59E-5	8.69E-8	1.72E-6	3.92E-9	-5.53E-6	1.22E-5
EP-m	kg N eq	5.10E-4	9.90E-5	1.15E-4	7.25E-4	2.15E-5	9.65E-5	1.93E-6	-2.49E-4	5.95E-4
EP-T	mol N eq	5.79E-3	1.09E-3	1.43E-3	8.31E-3	2.37E-4	1.06E-3	1.21E-5	-2.76E-3	6.87E-3
POCP	kg NMVOC eq	2.64E-3	3.12E-4	3.31E-4	3.28E-3	6.78E-5	3.35E-4	4.54E-6	-1.27E-3	2.42E-3
ADP-mm	kg Sb eq	1.29E-5	1.26E-6	5.30E-6	1.94E-5	2.73E-7	1.29E-6	3.02E-9	-3.26E-6	1.77E-5
ADP-f	MJ	2.95E+1	7.45E-1	1.74E+1	4.77E+1	1.62E-1	1.04E+0	9.12E-3	-1.58E+1	3.31E+1
WDP	m3 depriv.	5.97E-1	2.29E-3	3.03E-1	9.02E-1	4.97E-4	2.03E-2	5.04E-5	-2.71E-1	6.52E-1
PM	disease inc.	2.68E-8	4.38E-9	5.13E-9	3.63E-8	9.53E-10	5.40E-9	6.27E-11	-1.17E-8	3.10E-8
IR	kBq U-235 eq	1.58E-2	3.26E-3	2.04E-1	2.23E-1	7.08E-4	3.13E-3	4.22E-5	-7.35E-3	2.20E-1
ETP-fw	CTUe	5.07E+0	6.05E-1	5.83E+0	1.15E+1	1.32E-1	1.17E+0	7.63E-3	-2.02E+0	1.08E+1
HTP-c	CTUh	2.02E-10	2.15E-11	1.25E-10	3.49E-10	4.68E-12	1.47E-10	2.26E-13	-8.37E-11	4.17E-10
HTP-nc	CTUh	5.62E-9	7.22E-10	3.98E-9	1.03E-8	1.57E-10	1.77E-9	4.93E-12	-2.36E-9	9.89E-9
SQP	Pt	1.24E+0	6.38E-1	4.77E+0	6.65E+0	1.39E-1	8.27E-1	2.34E-2	-6.13E-1	7.03E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.64E-1	1.07E-2	2.46E+0	2.94E+0	2.32E-3	5.10E-2	3.51E-4	-2.27E-1	2.77E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.64E-1	1.07E-2	2.46E+0	2.94E+0	2.32E-3	5.10E-2	3.51E-4	-2.27E-1	2.77E+0
PENRE	MJ	3.17E+1	7.91E-1	1.75E+1	5.00E+1	1.72E-1	1.10E+0	9.68E-3	-1.71E+1	3.42E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.17E+1	7.91E-1	1.75E+1	5.00E+1	1.72E-1	1.10E+0	9.68E-3	-1.71E+1	3.42E+1
PET	MJ	3.22E+1	8.02E-1	1.99E+1	5.29E+1	1.74E-1	1.15E+0	1.00E-2	-1.73E+1	3.70E+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	9.27E-3	8.44E-5	9.74E-3	1.91E-2	1.83E-5	6.01E-4	1.12E-5	-4.07E-3	1.56E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.81E-6	1.91E-6	3.26E-7	6.05E-6	4.14E-7	1.69E-6	1.10E-8	-3.97E-6	4.20E-6
NHWD	kg	3.56E-2	4.62E-2	9.30E-3	9.11E-2	1.00E-2	5.23E-2	4.01E-2	-1.21E-2	1.81E-1
RWD	kg	1.36E-5	5.07E-6	4.87E-7	1.92E-5	1.10E-6	3.96E-6	5.95E-8	-6.66E-6	1.76E-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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