Environmental Profile

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

Ecochain v3.5.80

Product:	3075849 - EK PP-RCT Elbow 90° GY 125
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

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.26	0.02	0.06	0.34	0	0.1	0	-0.15	0.3
ADPE	kg Sb-eq	4.74E-5	4.71E-6	1.88E-5	7.09E-5	1.03E-6	5.07E-6	1.14E-8	-1.29E-5	6.41E-5
ADPF	kg Sb-eq	5.26E-2	1.33E-3	1.44E-3	5.54E-2	2.90E-4	1.93E-3	1.59E-5	-2.88E-2	2.88E-2
GWP	kg CO2-eq	3.05E+0	1.81E-1	2.60E-1	3.49E+0	3.95E-2	1.21E+0	1.60E-2	-1.86E+0	2.89E+0
ODP	kg CFC-11-eq	7.26E-8	3.35E-8	4.38E-7	5.44E-7	7.32E-9	2.58E-8	3.79E-10	-7.47E-8	5.02E-7
POCP	kg ethene-eq	2.52E-3	1.08E-4	1.86E-4	2.81E-3	2.37E-5	1.94E-4	3.65E-6	-1.24E-3	1.79E-3
AP	kg SO2-eq	9.63E-3	7.78E-4	1.76E-3	1.22E-2	1.70E-4	9.89E-4	8.37E-6	-4.72E-3	8.62E-3
EP	kg PO4 3−-eq	9.42E-4	1.55E-4	2.27E-4	1.32E-3	3.39E-5	1.76E-4	3.65E-6	-5.04E-4	1.03E-3
HTP	kg 1,4-DB-eq	4.89E-1	7.73E-2	3.14E-1	8.80E-1	1.69E-2	3.92E-1	1.25E-3	-2.42E-1	1.05E+0
FAETP	kg 1,4-DB-eq	1.46E-2	2.26E-3	1.13E-2	2.82E-2	4.95E-4	8.70E-3	1.36E-3	-7.14E-3	3.16E-2
MAETP	kg 1,4-DB-eq	3.26E+1	8.09E+0	3.13E+1	7.21E+1	1.77E+0	2.00E+1	1.35E+0	-1.48E+1	8.03E+1
TETP	kg 1,4-DB-eq	2.27E-3	2.74E-4	1.62E-2	1.87E-2	5.98E-5	1.20E-3	2.04E-6	-1.83E-3	1.82E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.19E+0	1.82E-1	3.07E-1	3.68E+0	3.98E-2	1.26E+0	1.88E-2	-1.83E+0	3.17E+0
GWP-f	kg CO2 eq	3.18E+0	1.82E-1	2.48E-1	3.61E+0	3.98E-2	1.21E+0	1.88E-2	-1.93E+0	2.95E+0
GWP-b	kg CO2 eq	1.38E-2	1.11E-4	5.55E-2	6.95E-2	2.42E-5	4.43E-2	1.63E-5	9.85E-2	2.12E-1
GWP-luluc	kg CO2 eq	1.43E-3	6.45E-5	3.84E-3	5.33E-3	1.41E-5	2.27E-4	3.23E-7	-1.09E-3	4.48E-3
ODP	kg CFC11 eq	7.03E-8	4.20E-8	2.44E-7	3.57E-7	9.17E-9	3.06E-8	4.71E-10	-7.85E-8	3.18E-7
AP	mol H+ eq	1.16E-2	1.04E-3	2.23E-3	1.49E-2	2.27E-4	1.28E-3	1.12E-5	-5.70E-3	1.07E-2
EP-fw	kg P eq	5.29E-5	1.50E-6	8.13E-6	6.25E-5	3.28E-7	6.57E-6	1.48E-8	-2.95E-5	3.99E-5
EP-m	kg N eq	2.01E-3	3.71E-4	4.15E-4	2.80E-3	8.11E-5	3.77E-4	7.28E-6	-1.04E-3	2.23E-3
EP-T	mol N eq	2.25E-2	4.09E-3	5.11E-3	3.17E-2	8.94E-4	4.14E-3	4.56E-5	-1.15E-2	2.53E-2
POCP	kg NMVOC eq	9.90E-3	1.17E-3	1.19E-3	1.23E-2	2.56E-4	1.31E-3	1.71E-5	-5.03E-3	8.81E-3
ADP-mm	kg Sb eq	4.74E-5	4.71E-6	1.88E-5	7.09E-5	1.03E-6	5.07E-6	1.14E-8	-1.29E-5	6.41E-5
ADP-f	MJ	1.10E+2	2.80E+0	6.18E+1	1.75E+2	6.11E-1	3.98E+0	3.44E-2	-5.97E+1	1.20E+2
WDP	m3 depriv.	2.21E+0	8.58E-3	1.08E+0	3.31E+0	1.87E-3	7.69E-2	1.87E-4	-1.16E+0	2.22E+0
PM	disease inc.	1.05E-7	1.64E-8	1.85E-8	1.40E-7	3.59E-9	2.10E-8	2.36E-10	-5.33E-8	1.11E-7
IR	kBq U-235 eq	6.10E-2	1.22E-2	7.23E-1	7.96E-1	2.67E-3	1.21E-2	1.59E-4	-3.37E-2	7.78E-1
ETP-fw	CTUe	3.02E+1	2.27E+0	2.07E+1	5.32E+1	4.96E-1	4.58E+0	2.88E-2	-1.52E+1	4.32E+1
HTP-c	CTUh	7.74E-10	8.08E-11	4.51E-10	1.31E-9	1.77E-11	5.56E-10	8.50E-13	-3.70E-10	1.51E-9
HTP-nc	CTUh	2.16E-8	2.71E-9	1.42E-8	3.85E-8	5.91E-10	6.75E-9	1.86E-11	-1.08E-8	3.51E-8
SQP	Pt	8.26E+0	2.39E+0	1.69E+1	2.76E+1	5.23E-1	3.16E+0	8.82E-2	-2.04E+1	1.10E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.48E+0	4.01E-2	8.73E+0	1.13E+1	8.76E-3	1.94E-1	1.32E-3	-4.14E+0	7.32E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.48E+0	4.01E-2	8.73E+0	1.13E+1	8.76E-3	1.94E-1	1.32E-3	-4.14E+0	7.32E+0
PENRE	MJ	1.18E+2	2.97E+0	6.20E+1	1.83E+2	6.49E-1	4.24E+0	3.65E-2	-6.43E+1	1.24E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.18E+2	2.97E+0	6.20E+1	1.83E+2	6.49E-1	4.24E+0	3.65E-2	-6.43E+1	1.24E+2
PET	MJ	1.21E+2	3.01E+0	7.07E+1	1.95E+2	6.57E-1	4.44E+0	3.78E-2	-6.84E+1	1.31E+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	3.45E-2	3.17E-4	3.48E-2	6.96E-2	6.91E-5	2.28E-3	4.23E-5	-1.91E-2	5.29E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.55E-5	7.15E-6	1.28E-6	2.39E-5	1.56E-6	6.59E-6	4.16E-8	-1.52E-5	1.69E-5
NHWD	kg	1.42E-1	1.73E-1	3.64E-2	3.52E-1	3.79E-2	1.97E-1	1.51E-1	-5.33E-2	6.84E-1
RWD	kg	5.36E-5	1.90E-5	1.91E-6	7.46E-5	4.15E-6	1.55E-5	2.24E-7	-3.07E-5	6.37E-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