Environmental Profile

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

Ecochain v3.5.80

Product:	3079530 - EK PP-RCT End cap GY 90
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	9.14E-6	9.49E-7	3.70E-6	1.38E-5	1.91E-7	9.05E-7	2.12E-9	-2.28E-6	1.26E-5
ADPF	kg Sb-eq	9.79E-3	2.67E-4	2.75E-4	1.03E-2	5.39E-5	3.52E-4	2.95E-6	-5.35E-3	5.40E-3
GWP	kg CO2-eq	5.61E-1	3.64E-2	4.97E-2	6.47E-1	7.34E-3	2.33E-1	2.97E-3	-3.42E-1	5.49E-1
ODP	kg CFC-11-eq	1.21E-8	6.75E-9	8.63E-8	1.05E-7	1.36E-9	4.61E-9	7.05E-11	-1.31E-8	9.80E-8
POCP	kg ethene-eq	4.72E-4	2.18E-5	3.61E-5	5.30E-4	4.40E-6	3.49E-5	6.78E-7	-2.23E-4	3.46E-4
AP	kg SO2-eq	1.78E-3	1.57E-4	3.45E-4	2.28E-3	3.16E-5	1.78E-4	1.56E-6	-8.11E-4	1.68E-3
EP	kg PO4 3−-eq	1.62E-4	3.13E-5	4.43E-5	2.37E-4	6.31E-6	3.15E-5	6.77E-7	-7.41E-5	2.02E-4
HTP	kg 1,4-DB-eq	8.90E-2	1.56E-2	6.05E-2	1.65E-1	3.14E-3	7.19E-2	2.33E-4	-3.99E-2	2.00E-1
FAETP	kg 1,4-DB-eq	2.16E-3	4.56E-4	2.19E-3	4.80E-3	9.19E-5	1.64E-3	2.52E-4	-7.86E-4	6.00E-3
MAETP	kg 1,4-DB-eq	5.95E+0	1.63E+0	6.12E+0	1.37E+1	3.28E-1	3.64E+0	2.51E-1	-2.42E+0	1.55E+1
TETP	kg 1,4-DB-eq	3.67E-4	5.51E-5	3.19E-3	3.62E-3	1.11E-5	2.22E-4	3.81E-7	-1.58E-4	3.69E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.88E-1	3.67E-2	5.89E-2	6.84E-1	7.40E-3	2.34E-1	3.49E-3	-3.55E-1	5.73E-1
GWP-f	kg CO2 eq	5.86E-1	3.67E-2	4.76E-2	6.70E-1	7.40E-3	2.34E-1	3.49E-3	-3.54E-1	5.61E-1
GWP-b	kg CO2 eq	1.98E-3	2.23E-5	1.06E-2	1.26E-2	4.49E-6	-1.12E-4	3.03E-6	-7.86E-4	1.17E-2
GWP-luluc	kg CO2 eq	1.70E-4	1.30E-5	7.57E-4	9.40E-4	2.62E-6	4.17E-5	6.04E-8	-6.99E-5	9.15E-4
ODP	kg CFC11 eq	1.14E-8	8.45E-9	4.81E-8	6.80E-8	1.70E-9	5.45E-9	8.75E-11	-1.38E-8	6.14E-8
AP	mol H+ eq	2.14E-3	2.09E-4	4.37E-4	2.78E-3	4.21E-5	2.30E-4	2.09E-6	-9.76E-4	2.08E-3
EP-fw	kg P eq	9.09E-6	3.02E-7	1.58E-6	1.10E-5	6.09E-8	1.20E-6	2.75E-9	-3.84E-6	8.40E-6
EP-m	kg N eq	3.53E-4	7.48E-5	8.06E-5	5.08E-4	1.51E-5	6.72E-5	1.35E-6	-1.73E-4	4.19E-4
EP-T	mol N eq	4.01E-3	8.24E-4	1.00E-3	5.84E-3	1.66E-4	7.40E-4	8.48E-6	-1.92E-3	4.83E-3
POCP	kg NMVOC eq	1.82E-3	2.36E-4	2.32E-4	2.29E-3	4.75E-5	2.34E-4	3.18E-6	-8.83E-4	1.69E-3
ADP-mm	kg Sb eq	9.14E-6	9.49E-7	3.70E-6	1.38E-5	1.91E-7	9.05E-7	2.12E-9	-2.28E-6	1.26E-5
ADP-f	MJ	2.05E+1	5.63E-1	1.22E+1	3.33E+1	1.14E-1	7.25E-1	6.39E-3	-1.10E+1	2.31E+1
WDP	m3 depriv.	4.14E-1	1.73E-3	2.12E-1	6.27E-1	3.48E-4	1.42E-2	3.60E-5	-1.89E-1	4.53E-1
PM	disease inc.	1.86E-8	3.31E-9	3.59E-9	2.55E-8	6.68E-10	3.77E-9	4.40E-11	-8.14E-9	2.18E-8
IR	kBq U-235 eq	1.09E-2	2.46E-3	1.43E-1	1.56E-1	4.96E-4	2.19E-3	2.96E-5	-5.12E-3	1.54E-1
ETP-fw	CTUe	3.47E+0	4.57E-1	4.08E+0	8.01E+0	9.22E-2	8.20E-1	5.35E-3	-1.38E+0	7.54E+0
HTP-c	CTUh	1.41E-10	1.63E-11	8.77E-11	2.45E-10	3.28E-12	1.03E-10	1.59E-13	-5.82E-11	2.93E-10
HTP-nc	CTUh	3.91E-9	5.45E-10	2.78E-9	7.23E-9	1.10E-10	1.24E-9	3.46E-12	-1.64E-9	6.94E-9
SQP	Pt	8.37E-1	4.82E-1	3.34E+0	4.66E+0	9.71E-2	5.79E-1	1.64E-2	-3.71E-1	4.98E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.17E-1	8.08E-3	1.72E+0	2.05E+0	1.63E-3	3.57E-2	2.45E-4	-1.49E-1	1.94E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.17E-1	8.08E-3	1.72E+0	2.05E+0	1.63E-3	3.57E-2	2.45E-4	-1.49E-1	1.94E+0
PENRE	MJ	2.20E+1	5.98E-1	1.22E+1	3.48E+1	1.21E-1	7.72E-1	6.78E-3	-1.19E+1	2.38E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.20E+1	5.98E-1	1.22E+1	3.48E+1	1.21E-1	7.72E-1	6.78E-3	-1.19E+1	2.38E+1
PET	MJ	2.23E+1	6.06E-1	1.39E+1	3.69E+1	1.22E-1	8.08E-1	7.03E-3	-1.20E+1	2.58E+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	6.41E-3	6.37E-5	6.81E-3	1.33E-2	1.28E-5	4.20E-4	7.86E-6	-2.84E-3	1.09E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.67E-6	1.44E-6	2.26E-7	4.33E-6	2.90E-7	1.18E-6	7.74E-9	-2.71E-6	3.10E-6
NHWD	kg	2.46E-2	3.49E-2	6.47E-3	6.60E-2	7.04E-3	3.64E-2	2.81E-2	-8.45E-3	1.29E-1
RWD	kg	9.42E-6	3.83E-6	3.39E-7	1.36E-5	7.72E-7	2.77E-6	4.17E-8	-4.63E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777