Environmental Profile

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

Ecochain v3.5.80

Product:	3084278 - EK PP-RCT End cap GN 40
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	0.01	0	0	0.01	0	0	0	-0	0.01
ADPE	kg Sb-eq	1.14E-6	1.09E-7	4.12E-7	1.66E-6	2.25E-8	1.07E-7	2.49E-10	-2.70E-7	1.52E-6
ADPF	kg Sb-eq	1.20E-3	3.06E-5	3.15E-5	1.27E-3	6.33E-6	4.18E-5	3.47E-7	-6.49E-4	6.65E-4
GWP	kg CO2-eq	7.02E-2	4.17E-3	5.68E-3	8.00E-2	8.62E-4	3.09E-2	3.49E-4	-4.24E-2	6.97E-2
ODP	kg CFC-11-eq	1.58E-9	7.73E-10	9.60E-9	1.20E-8	1.60E-10	5.50E-10	8.28E-12	-1.74E-9	1.09E-8
POCP	kg ethene-eq	5.97E-5	2.50E-6	4.08E-6	6.63E-5	5.17E-7	4.18E-6	7.96E-8	-2.67E-5	4.44E-5
AP	kg SO2-eq	2.26E-4	1.79E-5	3.86E-5	2.83E-4	3.71E-6	2.14E-5	1.83E-7	-9.71E-5	2.11E-4
EP	kg PO4 3−-eq	2.10E-5	3.58E-6	4.98E-6	2.95E-5	7.41E-7	3.80E-6	7.93E-8	-9.04E-6	2.51E-5
HTP	kg 1,4-DB-eq	1.16E-2	1.78E-3	6.87E-3	2.03E-2	3.69E-4	8.58E-3	2.73E-5	-4.84E-3	2.44E-2
FAETP	kg 1,4-DB-eq	2.92E-4	5.22E-5	2.48E-4	5.92E-4	1.08E-5	2.13E-4	2.94E-5	-9.69E-5	7.48E-4
MAETP	kg 1,4-DB-eq	8.01E-1	1.87E-1	6.87E-1	1.67E+0	3.86E-2	4.67E-1	2.94E-2	-2.92E-1	1.92E+0
TETP	kg 1,4-DB-eq	4.87E-5	6.32E-6	3.55E-4	4.10E-4	1.31E-6	2.62E-5	4.49E-8	-2.00E-5	4.18E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.33E-2	4.20E-3	6.72E-3	8.42E-2	8.69E-4	3.11E-2	4.09E-4	-4.39E-2	7.27E-2
GWP-f	kg CO2 eq	7.32E-2	4.20E-3	5.42E-3	8.28E-2	8.69E-4	3.10E-2	4.09E-4	-4.39E-2	7.12E-2
GWP-b	kg CO2 eq	1.27E-4	2.55E-6	1.21E-3	1.34E-3	5.27E-7	3.41E-5	3.55E-7	1.43E-5	1.39E-3
GWP-luluc	kg CO2 eq	2.41E-5	1.49E-6	8.41E-5	1.10E-4	3.07E-7	4.92E-6	7.14E-9	-9.08E-6	1.06E-4
ODP	kg CFC11 eq	1.51E-9	9.68E-10	5.36E-9	7.84E-9	2.00E-10	6.51E-10	1.03E-11	-1.86E-9	6.84E-9
AP	mol H+ eq	2.72E-4	2.39E-5	4.89E-5	3.45E-4	4.95E-6	2.76E-5	2.46E-7	-1.17E-4	2.60E-4
EP-fw	kg P eq	1.22E-6	3.46E-8	1.78E-7	1.43E-6	7.15E-9	1.42E-7	3.25E-10	-4.65E-7	1.11E-6
EP-m	kg N eq	4.52E-5	8.56E-6	9.09E-6	6.29E-5	1.77E-6	8.16E-6	1.58E-7	-2.11E-5	5.19E-5
EP-T	mol N eq	5.13E-4	9.44E-5	1.12E-4	7.20E-4	1.95E-5	8.98E-5	9.97E-7	-2.33E-4	5.97E-4
POCP	kg NMVOC eq	2.31E-4	2.70E-5	2.61E-5	2.84E-4	5.58E-6	2.82E-5	3.74E-7	-1.06E-4	2.12E-4
ADP-mm	kg Sb eq	1.14E-6	1.09E-7	4.12E-7	1.66E-6	2.25E-8	1.07E-7	2.49E-10	-2.70E-7	1.52E-6
ADP-f	MJ	2.51E+0	6.45E-2	1.36E+0	3.93E+0	1.33E-2	8.59E-2	7.51E-4	-1.33E+0	2.70E+0
WDP	m3 depriv.	5.19E-2	1.98E-4	2.38E-2	7.58E-2	4.09E-5	1.68E-3	4.40E-6	-2.25E-2	5.50E-2
PM	disease inc.	2.35E-9	3.79E-10	4.05E-10	3.14E-9	7.84E-11	4.50E-10	5.16E-12	-9.74E-10	2.70E-9
IR	kBq U-235 eq	1.40E-3	2.82E-4	1.59E-2	1.76E-2	5.83E-5	2.60E-4	3.47E-6	-6.21E-4	1.73E-2
ETP-fw	CTUe	4.85E-1	5.24E-2	4.55E-1	9.92E-1	1.08E-2	9.79E-2	6.29E-4	-1.74E-1	9.28E-1
HTP-c	CTUh	1.80E-11	1.86E-12	9.88E-12	2.98E-11	3.85E-13	1.26E-11	1.88E-14	-7.06E-12	3.57E-11
HTP-nc	CTUh	5.00E-10	6.24E-11	3.11E-10	8.73E-10	1.29E-11	1.50E-10	4.07E-13	-1.97E-10	8.39E-10
SQP	Pt	1.21E-1	5.52E-2	3.71E-1	5.48E-1	1.14E-2	6.86E-2	1.92E-3	-6.40E-2	5.65E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.29E-2	9.25E-4	1.91E-1	2.35E-1	1.91E-4	4.22E-3	2.87E-5	-2.12E-2	2.19E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.29E-2	9.25E-4	1.91E-1	2.35E-1	1.91E-4	4.22E-3	2.87E-5	-2.12E-2	2.19E-1
PENRE	MJ	2.70E+0	6.85E-2	1.36E+0	4.13E+0	1.42E-2	9.15E-2	7.97E-4	-1.44E+0	2.79E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.70E+0	6.85E-2	1.36E+0	4.13E+0	1.42E-2	9.15E-2	7.97E-4	-1.44E+0	2.79E+0
PET	MJ	2.74E+0	6.94E-2	1.55E+0	4.36E+0	1.43E-2	9.58E-2	8.26E-4	-1.46E+0	3.01E+0
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	8.30E-4	7.30E-6	7.62E-4	1.60E-3	1.51E-6	5.02E-5	9.23E-7	-3.41E-4	1.31E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.41E-7	1.65E-7	2.77E-8	5.33E-7	3.41E-8	1.42E-7	9.10E-10	-3.64E-7	3.46E-7
NHWD	kg	3.27E-3	4.00E-3	7.91E-4	8.06E-3	8.26E-4	4.46E-3	3.30E-3	-1.02E-3	1.56E-2
RWD	kg	1.21E-6	4.39E-7	4.15E-8	1.69E-6	9.07E-8	3.30E-7	4.90E-9	-5.66E-7	1.55E-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