Environmental Profile

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

Ecochain v3.5.80

Product:	3085136 - EK PP-RCT Reducer I/E GN 40x32
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	1.05E-6	1.12E-7	3.22E-7	1.48E-6	2.25E-8	1.09E-7	2.49E-10	-2.77E-7	1.33E-6
ADPF	kg Sb-eq	1.13E-3	3.15E-5	2.64E-5	1.19E-3	6.33E-6	4.18E-5	3.47E-7	-6.25E-4	6.14E-4
GWP	kg CO2-eq	6.55E-2	4.29E-3	4.75E-3	7.45E-2	8.62E-4	2.61E-2	3.49E-4	-4.00E-2	6.18E-2
ODP	kg CFC-11-eq	1.55E-9	7.95E-10	7.46E-9	9.80E-9	1.60E-10	5.54E-10	8.28E-12	-1.55E-9	8.97E-9
POCP	kg ethene-eq	5.40E-5	2.57E-6	3.30E-6	5.99E-5	5.17E-7	4.17E-6	7.96E-8	-2.66E-5	3.80E-5
AP	kg SO2-eq	2.08E-4	1.85E-5	3.05E-5	2.57E-4	3.71E-6	2.13E-5	1.83E-7	-9.98E-5	1.83E-4
EP	kg PO4 3−-eq	1.99E-5	3.69E-6	4.00E-6	2.76E-5	7.41E-7	3.77E-6	7.93E-8	-1.01E-5	2.20E-5
HTP	kg 1,4-DB-eq	1.04E-2	1.83E-3	5.66E-3	1.79E-2	3.69E-4	8.49E-3	2.73E-5	-5.03E-3	2.18E-2
FAETP	kg 1,4-DB-eq	3.05E-4	5.37E-5	2.03E-4	5.61E-4	1.08E-5	1.87E-4	2.94E-5	-1.32E-4	6.56E-4
MAETP	kg 1,4-DB-eq	7.13E-1	1.92E-1	5.47E-1	1.45E+0	3.86E-2	4.26E-1	2.94E-2	-3.08E-1	1.64E+0
TETP	kg 1,4-DB-eq	4.63E-5	6.50E-6	2.76E-4	3.29E-4	1.31E-6	2.61E-5	4.49E-8	-3.20E-5	3.24E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.86E-2	4.33E-3	5.59E-3	7.85E-2	8.69E-4	2.68E-2	4.09E-4	-4.01E-2	6.65E-2
GWP-f	kg CO2 eq	6.83E-2	4.32E-3	4.50E-3	7.71E-2	8.69E-4	2.62E-2	4.09E-4	-4.14E-2	6.32E-2
GWP-b	kg CO2 eq	2.93E-4	2.62E-6	1.02E-3	1.32E-3	5.27E-7	6.07E-4	3.55E-7	1.33E-3	3.26E-3
GWP-luluc	kg CO2 eq	2.68E-5	1.53E-6	6.53E-5	9.35E-5	3.07E-7	4.92E-6	7.14E-9	-1.81E-5	8.07E-5
ODP	kg CFC11 eq	1.49E-9	9.96E-10	4.18E-9	6.67E-9	2.00E-10	6.56E-10	1.03E-11	-1.63E-9	5.90E-9
AP	mol H+ eq	2.51E-4	2.46E-5	3.86E-5	3.14E-4	4.95E-6	2.75E-5	2.46E-7	-1.20E-4	2.27E-4
EP-fw	kg P eq	1.10E-6	3.56E-8	1.43E-7	1.28E-6	7.15E-9	1.42E-7	3.25E-10	-5.72E-7	8.61E-7
EP-m	kg N eq	4.25E-5	8.81E-6	7.33E-6	5.86E-5	1.77E-6	8.05E-6	1.58E-7	-2.17E-5	4.69E-5
EP-T	mol N eq	4.78E-4	9.71E-5	8.88E-5	6.64E-4	1.95E-5	8.86E-5	9.97E-7	-2.41E-4	5.32E-4
POCP	kg NMVOC eq	2.12E-4	2.78E-5	2.09E-5	2.61E-4	5.58E-6	2.80E-5	3.74E-7	-1.07E-4	1.87E-4
ADP-mm	kg Sb eq	1.05E-6	1.12E-7	3.22E-7	1.48E-6	2.25E-8	1.09E-7	2.49E-10	-2.77E-7	1.33E-6
ADP-f	MJ	2.37E+0	6.64E-2	1.05E+0	3.49E+0	1.33E-2	8.61E-2	7.51E-4	-1.29E+0	2.30E+0
WDP	m3 depriv.	4.79E-2	2.04E-4	1.90E-2	6.71E-2	4.09E-5	1.67E-3	4.40E-6	-2.42E-2	4.46E-2
PM	disease inc.	2.23E-9	3.90E-10	3.30E-10	2.95E-9	7.84E-11	4.51E-10	5.16E-12	-1.09E-9	2.39E-9
IR	kBq U-235 eq	1.30E-3	2.90E-4	1.23E-2	1.39E-2	5.83E-5	2.61E-4	3.47E-6	-6.83E-4	1.35E-2
ETP-fw	CTUe	5.68E-1	5.39E-2	3.57E-1	9.78E-1	1.08E-2	9.84E-2	6.29E-4	-2.69E-1	8.19E-1
HTP-c	CTUh	1.66E-11	1.92E-12	7.95E-12	2.65E-11	3.85E-13	1.22E-11	1.88E-14	-7.59E-12	3.14E-11
HTP-nc	CTUh	4.66E-10	6.42E-11	2.45E-10	7.76E-10	1.29E-11	1.46E-10	4.07E-13	-2.20E-10	7.16E-10
SQP	Pt	1.46E-1	5.68E-2	2.89E-1	4.91E-1	1.14E-2	6.85E-2	1.92E-3	-2.98E-1	2.75E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.72E-2	9.52E-4	1.48E-1	1.97E-1	1.91E-4	4.22E-3	2.87E-5	-6.36E-2	1.37E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.72E-2	9.52E-4	1.48E-1	1.97E-1	1.91E-4	4.22E-3	2.87E-5	-6.36E-2	1.37E-1
PENRE	MJ	2.55E+0	7.04E-2	1.06E+0	3.67E+0	1.42E-2	9.17E-2	7.97E-4	-1.39E+0	2.39E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.55E+0	7.04E-2	1.06E+0	3.67E+0	1.42E-2	9.17E-2	7.97E-4	-1.39E+0	2.39E+0
PET	MJ	2.59E+0	7.14E-2	1.21E+0	3.87E+0	1.43E-2	9.60E-2	8.26E-4	-1.46E+0	2.53E+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	7.44E-4	7.51E-6	6.03E-4	1.36E-3	1.51E-6	4.95E-5	9.23E-7	-3.85E-4	1.02E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.24E-7	1.70E-7	2.72E-8	5.21E-7	3.41E-8	1.42E-7	9.10E-10	-3.18E-7	3.80E-7
NHWD	kg	2.94E-3	4.11E-3	7.72E-4	7.82E-3	8.26E-4	4.25E-3	3.30E-3	-1.10E-3	1.51E-2
RWD	kg	1.13E-6	4.51E-7	4.08E-8	1.63E-6	9.07E-8	3.32E-7	4.90E-9	-6.20E-7	1.43E-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

Ecochain

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