Environmental Profile

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

Ecochain v3.5.80

Product:	3079588 - EK PP-RCT Reducer I/E GY 110x75
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	-0.02	0.05
ADPE	kg Sb-eq	8.36E-6	8.73E-7	3.33E-6	1.26E-5	1.73E-7	8.23E-7	1.91E-9	-2.07E-6	1.15E-5
ADPF	kg Sb-eq	9.13E-3	2.46E-4	2.50E-4	9.63E-3	4.87E-5	3.20E-4	2.67E-6	-4.94E-3	5.06E-3
GWP	kg CO2-eq	5.27E-1	3.35E-2	4.51E-2	6.06E-1	6.63E-3	2.28E-1	2.69E-3	-3.20E-1	5.23E-1
ODP	kg CFC-11-eq	1.14E-8	6.21E-9	7.76E-8	9.53E-8	1.23E-9	4.20E-9	6.38E-11	-1.28E-8	8.80E-8
POCP	kg ethene-eq	4.48E-4	2.01E-5	3.26E-5	5.01E-4	3.98E-6	3.19E-5	6.13E-7	-2.04E-4	3.33E-4
AP	kg SO2-eq	1.68E-3	1.44E-4	3.11E-4	2.14E-3	2.85E-5	1.63E-4	1.41E-6	-7.40E-4	1.59E-3
EP	kg PO4 3−-eq	1.54E-4	2.88E-5	4.00E-5	2.23E-4	5.70E-6	2.89E-5	6.12E-7	-6.82E-5	1.90E-4
HTP	kg 1,4-DB-eq	8.52E-2	1.43E-2	5.48E-2	1.54E-1	2.84E-3	6.56E-2	2.10E-4	-3.67E-2	1.86E-1
FAETP	kg 1,4-DB-eq	2.05E-3	4.19E-4	1.98E-3	4.45E-3	8.31E-5	1.58E-3	2.28E-4	-7.22E-4	5.62E-3
MAETP	kg 1,4-DB-eq	5.75E+0	1.50E+0	5.52E+0	1.28E+1	2.97E-1	3.48E+0	2.27E-1	-2.22E+0	1.46E+1
TETP	kg 1,4-DB-eq	3.55E-4	5.07E-5	2.87E-3	3.28E-3	1.01E-5	2.01E-4	3.44E-7	-1.46E-4	3.35E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.52E-1	3.38E-2	5.34E-2	6.39E-1	6.69E-3	2.28E-1	3.15E-3	-3.32E-1	5.45E-1
GWP-f	kg CO2 eq	5.50E-1	3.37E-2	4.31E-2	6.27E-1	6.69E-3	2.28E-1	3.15E-3	-3.31E-1	5.34E-1
GWP-b	kg CO2 eq	1.28E-3	2.05E-5	9.62E-3	1.09E-2	4.06E-6	-3.64E-5	2.74E-6	-5.69E-4	1.03E-2
GWP-luluc	kg CO2 eq	1.70E-4	1.19E-5	6.81E-4	8.63E-4	2.37E-6	3.78E-5	5.45E-8	-6.48E-5	8.39E-4
ODP	kg CFC11 eq	1.09E-8	7.78E-9	4.33E-8	6.19E-8	1.54E-9	4.97E-9	7.91E-11	-1.36E-8	5.49E-8
AP	mol H+ eq	2.02E-3	1.92E-4	3.94E-4	2.60E-3	3.81E-5	2.11E-4	1.89E-6	-8.92E-4	1.96E-3
EP-fw	kg P eq	8.86E-6	2.78E-7	1.43E-6	1.06E-5	5.50E-8	1.09E-6	2.49E-9	-3.51E-6	8.21E-6
EP-m	kg N eq	3.36E-4	6.88E-5	7.28E-5	4.77E-4	1.36E-5	6.20E-5	1.22E-6	-1.60E-4	3.94E-4
EP-T	mol N eq	3.81E-3	7.58E-4	9.02E-4	5.47E-3	1.50E-4	6.82E-4	7.67E-6	-1.77E-3	4.54E-3
POCP	kg NMVOC eq	1.73E-3	2.17E-4	2.09E-4	2.16E-3	4.29E-5	2.15E-4	2.88E-6	-8.09E-4	1.61E-3
ADP-mm	kg Sb eq	8.36E-6	8.73E-7	3.33E-6	1.26E-5	1.73E-7	8.23E-7	1.91E-9	-2.07E-6	1.15E-5
ADP-f	MJ	1.91E+1	5.18E-1	1.10E+1	3.06E+1	1.03E-1	6.59E-1	5.78E-3	-1.02E+1	2.12E+1
WDP	m3 depriv.	3.89E-1	1.59E-3	1.91E-1	5.82E-1	3.15E-4	1.29E-2	3.22E-5	-1.72E-1	4.23E-1
PM	disease inc.	1.75E-8	3.05E-9	3.24E-9	2.38E-8	6.04E-10	3.44E-9	3.97E-11	-7.41E-9	2.05E-8
IR	kBq U-235 eq	1.04E-2	2.26E-3	1.28E-1	1.41E-1	4.49E-4	1.99E-3	2.67E-5	-4.70E-3	1.39E-1
ETP-fw	CTUe	3.41E+0	4.21E-1	3.67E+0	7.50E+0	8.33E-2	7.48E-1	4.83E-3	-1.28E+0	7.06E+0
HTP-c	CTUh	1.33E-10	1.50E-11	7.92E-11	2.27E-10	2.97E-12	9.49E-11	1.43E-13	-5.35E-11	2.71E-10
HTP-nc	CTUh	3.69E-9	5.01E-10	2.51E-9	6.69E-9	9.93E-11	1.14E-9	3.13E-12	-1.50E-9	6.44E-9
SQP	Pt	8.44E-1	4.43E-1	3.00E+0	4.29E+0	8.78E-2	5.26E-1	1.48E-2	-3.67E-1	4.55E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.10E-1	7.43E-3	1.55E+0	1.87E+0	1.47E-3	3.24E-2	2.22E-4	-1.40E-1	1.76E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.10E-1	7.43E-3	1.55E+0	1.87E+0	1.47E-3	3.24E-2	2.22E-4	-1.40E-1	1.76E+0
PENRE	MJ	2.05E+1	5.50E-1	1.10E+1	3.20E+1	1.09E-1	7.02E-1	6.13E-3	-1.10E+1	2.19E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.05E+1	5.50E-1	1.10E+1	3.20E+1	1.09E-1	7.02E-1	6.13E-3	-1.10E+1	2.19E+1
PET	MJ	2.08E+1	5.57E-1	1.26E+1	3.39E+1	1.10E-1	7.34E-1	6.35E-3	-1.11E+1	2.37E+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	6.13E-3	5.86E-5	6.14E-3	1.23E-2	1.16E-5	3.84E-4	7.11E-6	-2.59E-3	1.01E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.50E-6	1.32E-6	2.10E-7	4.03E-6	2.62E-7	1.08E-6	6.99E-9	-2.67E-6	2.71E-6
NHWD	kg	2.38E-2	3.21E-2	5.99E-3	6.18E-2	6.36E-3	3.37E-2	2.54E-2	-7.73E-3	1.20E-1
RWD	kg	8.96E-6	3.52E-6	3.14E-7	1.28E-5	6.98E-7	2.52E-6	3.77E-8	-4.27E-6	1.18E-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

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