Environmental Profile

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

Ecochain v3.5.80

Product:	3082711 - EK PP-RCT Reducer I/E GY 63x40
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	-0.01	0.01
ADPE	kg Sb-eq	2.04E-6	1.88E-7	7.44E-7	2.97E-6	3.88E-8	1.90E-7	4.32E-10	-4.84E-7	2.72E-6
ADPF	kg Sb-eq	2.00E-3	5.29E-5	5.63E-5	2.11E-3	1.09E-5	7.28E-5	6.00E-7	-1.10E-3	1.10E-3
GWP	kg CO2-eq	1.18E-1	7.21E-3	1.02E-2	1.35E-1	1.49E-3	4.83E-2	6.03E-4	-7.14E-2	1.14E-1
ODP	kg CFC-11-eq	2.91E-9	1.34E-9	1.73E-8	2.16E-8	2.76E-10	9.71E-10	1.43E-11	-2.90E-9	1.99E-8
POCP	kg ethene-eq	9.75E-5	4.33E-6	7.32E-6	1.09E-4	8.93E-7	7.32E-6	1.38E-7	-4.66E-5	7.08E-5
AP	kg SO2-eq	3.79E-4	3.10E-5	6.96E-5	4.79E-4	6.41E-6	3.73E-5	3.17E-7	-1.76E-4	3.48E-4
EP	kg PO4 3−-eq	3.70E-5	6.19E-6	8.96E-6	5.22E-5	1.28E-6	6.64E-6	1.37E-7	-1.83E-5	4.19E-5
HTP	kg 1,4-DB-eq	1.95E-2	3.08E-3	1.23E-2	3.49E-2	6.37E-4	1.48E-2	4.71E-5	-8.97E-3	4.15E-2
FAETP	kg 1,4-DB-eq	5.89E-4	9.03E-5	4.45E-4	1.12E-3	1.86E-5	3.42E-4	5.06E-5	-2.47E-4	1.29E-3
MAETP	kg 1,4-DB-eq	1.35E+0	3.23E-1	1.24E+0	2.91E+0	6.66E-2	7.76E-1	5.06E-2	-5.48E-1	3.26E+0
TETP	kg 1,4-DB-eq	8.88E-5	1.09E-5	6.42E-4	7.41E-4	2.26E-6	4.54E-5	7.77E-8	-6.16E-5	7.27E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.23E-1	7.27E-3	1.20E-2	1.42E-1	1.50E-3	4.98E-2	7.07E-4	-7.10E-2	1.23E-1
GWP-f	kg CO2 eq	1.23E-1	7.27E-3	9.70E-3	1.40E-1	1.50E-3	4.85E-2	7.07E-4	-7.39E-2	1.16E-1
GWP-b	kg CO2 eq	4.23E-4	4.41E-6	2.17E-3	2.60E-3	9.11E-7	1.32E-3	6.13E-7	2.90E-3	6.82E-3
GWP-luluc	kg CO2 eq	5.31E-5	2.57E-6	1.52E-4	2.08E-4	5.31E-7	8.54E-6	1.24E-8	-3.55E-5	1.81E-4
ODP	kg CFC11 eq	2.83E-9	1.67E-9	9.67E-9	1.42E-8	3.46E-10	1.15E-9	1.78E-11	-3.06E-9	1.26E-8
AP	mol H+ eq	4.58E-4	4.14E-5	8.80E-5	5.87E-4	8.55E-6	4.82E-5	4.25E-7	-2.13E-4	4.32E-4
EP-fw	kg P eq	2.09E-6	5.98E-8	3.20E-7	2.47E-6	1.23E-8	2.47E-7	5.64E-10	-1.04E-6	1.68E-6
EP-m	kg N eq	7.80E-5	1.48E-5	1.63E-5	1.09E-4	3.06E-6	1.42E-5	2.73E-7	-3.86E-5	8.81E-5
EP-T	mol N eq	8.80E-4	1.63E-4	2.02E-4	1.24E-3	3.37E-5	1.57E-4	1.72E-6	-4.29E-4	1.01E-3
POCP	kg NMVOC eq	3.84E-4	4.67E-5	4.69E-5	4.78E-4	9.63E-6	4.93E-5	6.46E-7	-1.89E-4	3.48E-4
ADP-mm	kg Sb eq	2.04E-6	1.88E-7	7.44E-7	2.97E-6	3.88E-8	1.90E-7	4.32E-10	-4.84E-7	2.72E-6
ADP-f	MJ	4.20E+0	1.12E-1	2.45E+0	6.75E+0	2.30E-2	1.50E-1	1.30E-3	-2.27E+0	4.66E+0
WDP	m3 depriv.	8.59E-2	3.42E-4	4.28E-2	1.29E-1	7.07E-5	2.90E-3	7.86E-6	-4.28E-2	8.92E-2
PM	disease inc.	4.07E-9	6.56E-10	7.28E-10	5.45E-9	1.35E-10	7.89E-10	8.93E-12	-1.94E-9	4.44E-9
IR	kBq U-235 eq	2.38E-3	4.88E-4	2.87E-2	3.15E-2	1.01E-4	4.56E-4	5.99E-6	-1.23E-3	3.09E-2
ETP-fw	CTUe	1.13E+0	9.06E-2	8.20E-1	2.04E+0	1.87E-2	1.72E-1	1.09E-3	-5.13E-1	1.72E+0
HTP-c	CTUh	3.12E-11	3.22E-12	1.78E-11	5.21E-11	6.66E-13	2.17E-11	3.27E-14	-1.36E-11	6.09E-11
HTP-nc	CTUh	8.63E-10	1.08E-10	5.60E-10	1.53E-9	2.23E-11	2.57E-10	7.05E-13	-3.94E-10	1.42E-9
SQP	Pt	3.01E-1	9.54E-2	6.71E-1	1.07E+0	1.97E-2	1.19E-1	3.32E-3	-6.25E-1	5.84E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.11E-2	1.60E-3	3.46E-1	4.39E-1	3.30E-4	7.33E-3	4.95E-5	-1.30E-1	3.16E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.11E-2	1.60E-3	3.46E-1	4.39E-1	3.30E-4	7.33E-3	4.95E-5	-1.30E-1	3.16E-1
PENRE	MJ	4.50E+0	1.18E-1	2.46E+0	7.08E+0	2.45E-2	1.60E-1	1.38E-3	-2.45E+0	4.81E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.50E+0	1.18E-1	2.46E+0	7.08E+0	2.45E-2	1.60E-1	1.38E-3	-2.45E+0	4.81E+0
PET	MJ	4.59E+0	1.20E-1	2.80E+0	7.51E+0	2.48E-2	1.67E-1	1.43E-3	-2.58E+0	5.13E+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	1.37E-3	1.26E-5	1.37E-3	2.75E-3	2.61E-6	8.64E-5	1.59E-6	-6.91E-4	2.15E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.25E-7	2.85E-7	4.85E-8	9.58E-7	5.89E-8	2.49E-7	1.58E-9	-5.96E-7	6.71E-7
NHWD	kg	5.76E-3	6.91E-3	1.38E-3	1.41E-2	1.43E-3	7.54E-3	5.71E-3	-1.96E-3	2.68E-2
RWD	kg	2.09E-6	7.59E-7	7.25E-8	2.92E-6	1.57E-7	5.81E-7	8.46E-9	-1.12E-6	2.54E-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

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