Environmental Profile

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

Ecochain v3.5.80

Product:	3085811 - EK PP-RCT Reducer I/E GY 40x20
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	0	0	0	0	0	0	-0	0
ADPE	kg Sb-eq	8.08E-7	7.39E-8	2.66E-7	1.15E-6	1.43E-8	7.04E-8	1.60E-10	-1.80E-7	1.05E-6
ADPF	kg Sb-eq	7.20E-4	2.08E-5	2.03E-5	7.61E-4	4.03E-6	2.69E-5	2.21E-7	-4.00E-4	3.92E-4
GWP	kg CO2-eq	4.25E-2	2.83E-3	3.66E-3	4.90E-2	5.48E-4	1.69E-2	2.22E-4	-2.58E-2	4.09E-2
ODP	kg CFC-11-eq	1.12E-9	5.25E-10	6.19E-9	7.84E-9	1.02E-10	3.59E-10	5.28E-12	-1.04E-9	7.27E-9
POCP	kg ethene-eq	3.47E-5	1.70E-6	2.63E-6	3.90E-5	3.29E-7	2.70E-6	5.07E-8	-1.72E-5	2.49E-5
AP	kg SO2-eq	1.39E-4	1.22E-5	2.49E-5	1.76E-4	2.36E-6	1.37E-5	1.17E-7	-6.55E-5	1.26E-4
EP	kg PO4 3−-eq	1.38E-5	2.43E-6	3.21E-6	1.95E-5	4.71E-7	2.44E-6	5.02E-8	-7.01E-6	1.54E-5
HTP	kg 1,4-DB-eq	7.17E-3	1.21E-3	4.43E-3	1.28E-2	2.35E-4	5.45E-3	1.73E-5	-3.36E-3	1.52E-2
FAETP	kg 1,4-DB-eq	2.38E-4	3.55E-5	1.60E-4	4.33E-4	6.87E-6	1.21E-4	1.85E-5	-9.95E-5	4.80E-4
MAETP	kg 1,4-DB-eq	5.09E-1	1.27E-1	4.43E-1	1.08E+0	2.45E-2	2.79E-1	1.85E-2	-2.06E-1	1.19E+0
TETP	kg 1,4-DB-eq	3.33E-5	4.29E-6	2.29E-4	2.67E-4	8.31E-7	1.68E-5	2.88E-8	-2.55E-5	2.59E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.45E-2	2.86E-3	4.33E-3	5.17E-2	5.53E-4	1.76E-2	2.60E-4	-2.54E-2	4.47E-2
GWP-f	kg CO2 eq	4.43E-2	2.86E-3	3.49E-3	5.07E-2	5.53E-4	1.70E-2	2.60E-4	-2.68E-2	4.17E-2
GWP-b	kg CO2 eq	1.86E-4	1.73E-6	7.82E-4	9.70E-4	3.36E-7	6.20E-4	2.25E-7	1.38E-3	2.97E-3
GWP-luluc	kg CO2 eq	2.08E-5	1.01E-6	5.43E-5	7.61E-5	1.96E-7	3.15E-6	4.64E-9	-1.52E-5	6.43E-5
ODP	kg CFC11 eq	1.10E-9	6.58E-10	3.46E-9	5.22E-9	1.27E-10	4.26E-10	6.55E-12	-1.09E-9	4.69E-9
AP	mol H+ eq	1.68E-4	1.63E-5	3.15E-5	2.16E-4	3.15E-6	1.78E-5	1.57E-7	-7.92E-5	1.57E-4
EP-fw	kg P eq	7.65E-7	2.35E-8	1.15E-7	9.03E-7	4.55E-9	9.12E-8	2.10E-10	-4.10E-7	5.89E-7
EP-m	kg N eq	2.86E-5	5.82E-6	5.86E-6	4.03E-5	1.13E-6	5.23E-6	1.00E-7	-1.44E-5	3.23E-5
EP-T	mol N eq	3.23E-4	6.41E-5	7.23E-5	4.60E-4	1.24E-5	5.76E-5	6.36E-7	-1.60E-4	3.70E-4
POCP	kg NMVOC eq	1.38E-4	1.83E-5	1.68E-5	1.73E-4	3.55E-6	1.82E-5	2.38E-7	-6.99E-5	1.25E-4
ADP-mm	kg Sb eq	8.07E-7	7.39E-8	2.66E-7	1.15E-6	1.43E-8	7.04E-8	1.60E-10	-1.80E-7	1.05E-6
ADP-f	MJ	1.51E+0	4.38E-2	8.74E-1	2.43E+0	8.49E-3	5.53E-2	4.79E-4	-8.28E-1	1.66E+0
WDP	m3 depriv.	3.10E-2	1.35E-4	1.53E-2	4.65E-2	2.60E-5	1.07E-3	3.15E-6	-1.62E-2	3.14E-2
PM	disease inc.	1.50E-9	2.58E-10	2.61E-10	2.02E-9	4.99E-11	2.91E-10	3.29E-12	-7.42E-10	1.62E-9
IR	kBq U-235 eq	8.69E-4	1.92E-4	1.02E-2	1.13E-2	3.71E-5	1.69E-4	2.21E-6	-4.68E-4	1.10E-2
ETP-fw	CTUe	4.52E-1	3.56E-2	2.93E-1	7.81E-1	6.89E-3	6.36E-2	4.01E-4	-2.12E-1	6.41E-1
HTP-c	CTUh	1.17E-11	1.27E-12	6.37E-12	1.93E-11	2.45E-13	8.05E-12	1.22E-14	-5.15E-12	2.25E-11
HTP-nc	CTUh	3.22E-10	4.24E-11	2.01E-10	5.65E-10	8.21E-12	9.47E-11	2.61E-13	-1.50E-10	5.18E-10
SQP	Pt	1.20E-1	3.75E-2	2.40E-1	3.97E-1	7.26E-3	4.39E-2	1.23E-3	-2.85E-1	1.65E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.51E-2	6.29E-4	1.24E-1	1.59E-1	1.22E-4	2.70E-3	1.81E-5	-5.79E-2	1.04E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.51E-2	6.29E-4	1.24E-1	1.59E-1	1.22E-4	2.70E-3	1.81E-5	-5.79E-2	1.04E-1
PENRE	MJ	1.62E+0	4.65E-2	8.77E-1	2.54E+0	9.01E-3	5.90E-2	5.08E-4	-8.93E-1	1.72E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.62E+0	4.65E-2	8.77E-1	2.54E+0	9.01E-3	5.90E-2	5.08E-4	-8.93E-1	1.72E+0
PET	MJ	1.65E+0	4.72E-2	1.00E+0	2.70E+0	9.13E-3	6.17E-2	5.26E-4	-9.51E-1	1.82E+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	4.94E-4	4.96E-6	4.92E-4	9.91E-4	9.60E-7	3.17E-5	5.87E-7	-2.65E-4	7.59E-4
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.40E-7	1.12E-7	1.78E-8	3.70E-7	2.17E-8	9.19E-8	5.83E-10	-2.11E-7	2.73E-7
NHWD	kg	2.17E-3	2.72E-3	5.08E-4	5.39E-3	5.26E-4	2.74E-3	2.10E-3	-7.41E-4	1.00E-2
RWD	kg	7.67E-7	2.98E-7	2.67E-8	1.09E-6	5.77E-8	2.15E-7	3.12E-9	-4.27E-7	9.40E-7
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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