Environmental Profile

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

Ecochain v3.5.80

Product:	3083496 - EK PP-RCT Reducer I/E GY 50x40
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	1.25E-6	1.27E-7	4.74E-7	1.85E-6	2.52E-8	1.25E-7	2.79E-10	-3.19E-7	1.68E-6
ADPF	kg Sb-eq	1.31E-3	3.57E-5	3.62E-5	1.38E-3	7.09E-6	4.76E-5	3.89E-7	-7.16E-4	7.21E-4
GWP	kg CO2-eq	7.67E-2	4.86E-3	6.53E-3	8.81E-2	9.66E-4	3.13E-2	3.92E-4	-4.67E-2	7.40E-2
ODP	kg CFC-11-eq	1.90E-9	9.01E-10	1.10E-8	1.38E-8	1.79E-10	6.38E-10	9.29E-12	-1.93E-9	1.27E-8
POCP	kg ethene-eq	6.36E-5	2.92E-6	4.68E-6	7.12E-5	5.80E-7	4.80E-6	8.92E-8	-3.05E-5	4.61E-5
AP	kg SO2-eq	2.45E-4	2.09E-5	4.44E-5	3.11E-4	4.16E-6	2.45E-5	2.05E-7	-1.17E-4	2.23E-4
EP	kg PO4 3−-eq	2.43E-5	4.18E-6	5.72E-6	3.42E-5	8.30E-7	4.36E-6	8.91E-8	-1.26E-5	2.69E-5
HTP	kg 1,4-DB-eq	1.27E-2	2.08E-3	7.90E-3	2.26E-2	4.13E-4	9.66E-3	3.06E-5	-6.02E-3	2.67E-2
FAETP	kg 1,4-DB-eq	3.89E-4	6.09E-5	2.85E-4	7.34E-4	1.21E-5	2.22E-4	3.31E-5	-1.80E-4	8.22E-4
MAETP	kg 1,4-DB-eq	8.64E-1	2.17E-1	7.89E-1	1.87E+0	4.32E-2	5.09E-1	3.30E-2	-3.69E-1	2.09E+0
TETP	kg 1,4-DB-eq	5.92E-5	7.36E-6	4.08E-4	4.75E-4	1.46E-6	2.95E-5	5.02E-8	-4.66E-5	4.59E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.03E-2	4.90E-3	7.72E-3	9.29E-2	9.75E-4	3.25E-2	4.59E-4	-4.57E-2	8.11E-2
GWP-f	kg CO2 eq	8.00E-2	4.90E-3	6.23E-3	9.11E-2	9.74E-4	3.14E-2	4.59E-4	-4.83E-2	7.56E-2
GWP-b	kg CO2 eq	2.90E-4	2.97E-6	1.40E-3	1.69E-3	5.91E-7	1.15E-3	3.99E-7	2.57E-3	5.41E-3
GWP-luluc	kg CO2 eq	3.78E-5	1.73E-6	9.66E-5	1.36E-4	3.45E-7	5.56E-6	7.97E-9	-2.78E-5	1.14E-4
ODP	kg CFC11 eq	1.85E-9	1.13E-9	6.15E-9	9.13E-9	2.24E-10	7.55E-10	1.15E-11	-2.04E-9	8.09E-9
AP	mol H+ eq	2.97E-4	2.79E-5	5.61E-5	3.81E-4	5.55E-6	3.16E-5	2.76E-7	-1.41E-4	2.77E-4
EP-fw	kg P eq	1.38E-6	4.03E-8	2.05E-7	1.62E-6	8.01E-9	1.61E-7	3.63E-10	-7.37E-7	1.06E-6
EP-m	kg N eq	5.14E-5	9.98E-6	1.04E-5	7.18E-5	1.99E-6	9.36E-6	1.78E-7	-2.58E-5	5.75E-5
EP-T	mol N eq	5.75E-4	1.10E-4	1.29E-4	8.14E-4	2.19E-5	1.03E-4	1.12E-6	-2.87E-4	6.53E-4
POCP	kg NMVOC eq	2.51E-4	3.14E-5	2.99E-5	3.12E-4	6.25E-6	3.24E-5	4.19E-7	-1.25E-4	2.27E-4
ADP-mm	kg Sb eq	1.25E-6	1.27E-7	4.74E-7	1.85E-6	2.52E-8	1.25E-7	2.79E-10	-3.18E-7	1.68E-6
ADP-f	MJ	2.74E+0	7.52E-2	1.56E+0	4.37E+0	1.50E-2	9.79E-2	8.42E-4	-1.48E+0	3.01E+0
WDP	m3 depriv.	5.58E-2	2.31E-4	2.73E-2	8.33E-2	4.59E-5	1.89E-3	4.81E-6	-2.87E-2	5.65E-2
PM	disease inc.	2.67E-9	4.42E-10	4.66E-10	3.57E-9	8.79E-11	5.17E-10	5.79E-12	-1.32E-9	2.86E-9
IR	kBq U-235 eq	1.56E-3	3.29E-4	1.82E-2	2.01E-2	6.53E-5	2.99E-4	3.89E-6	-8.39E-4	1.96E-2
ETP-fw	CTUe	7.98E-1	6.10E-2	5.22E-1	1.38E+0	1.21E-2	1.13E-1	7.05E-4	-3.85E-1	1.12E+0
HTP-c	CTUh	2.00E-11	2.17E-12	1.13E-11	3.36E-11	4.32E-13	1.40E-11	2.10E-14	-9.23E-12	3.88E-11
HTP-nc	CTUh	5.57E-10	7.28E-11	3.57E-10	9.87E-10	1.45E-11	1.68E-10	4.56E-13	-2.69E-10	9.01E-10
SQP	Pt	2.19E-1	6.43E-2	4.27E-1	7.10E-1	1.28E-2	7.76E-2	2.16E-3	-5.28E-1	2.74E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.45E-2	1.08E-3	2.20E-1	2.85E-1	2.14E-4	4.77E-3	3.23E-5	-1.07E-1	1.84E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.45E-2	1.08E-3	2.20E-1	2.85E-1	2.14E-4	4.77E-3	3.23E-5	-1.07E-1	1.84E-1
PENRE	MJ	2.94E+0	7.98E-2	1.56E+0	4.59E+0	1.59E-2	1.04E-1	8.93E-4	-1.59E+0	3.11E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.94E+0	7.98E-2	1.56E+0	4.59E+0	1.59E-2	1.04E-1	8.93E-4	-1.59E+0	3.11E+0
PET	MJ	3.01E+0	8.09E-2	1.78E+0	4.87E+0	1.61E-2	1.09E-1	9.26E-4	-1.70E+0	3.30E+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	8.85E-4	8.51E-6	8.76E-4	1.77E-3	1.69E-6	5.63E-5	1.04E-6	-4.74E-4	1.35E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.04E-7	1.92E-7	3.19E-8	6.28E-7	3.82E-8	1.63E-7	1.02E-9	-3.95E-7	4.35E-7
NHWD	kg	3.74E-3	4.66E-3	9.10E-4	9.31E-3	9.27E-4	4.91E-3	3.70E-3	-1.32E-3	1.75E-2
RWD	kg	1.37E-6	5.11E-7	4.78E-8	1.93E-6	1.02E-7	3.81E-7	5.49E-9	-7.68E-7	1.65E-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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