Environmental Profile

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

Ecochain v3.5.80

Product:	3079571 - EK PP-RCT Reducer I/E GN 75x63
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	0.02	0	0	0.03	0	0.01	0	-0.01	0.03
ADPE	kg Sb-eq	4.23E-6	3.57E-7	1.58E-6	6.17E-6	7.63E-8	3.86E-7	8.45E-10	-9.78E-7	5.65E-6
ADPF	kg Sb-eq	4.49E-3	1.01E-4	1.21E-4	4.71E-3	2.15E-5	1.47E-4	1.18E-6	-2.36E-3	2.52E-3
GWP	kg CO2-eq	2.71E-1	1.37E-2	2.18E-2	3.06E-1	2.92E-3	1.27E-1	1.19E-3	-1.62E-1	2.75E-1
ODP	kg CFC-11-eq	6.87E-9	2.54E-9	3.68E-8	4.63E-8	5.42E-10	2.00E-9	2.81E-11	-7.71E-9	4.11E-8
POCP	kg ethene-eq	2.33E-4	8.22E-6	1.56E-5	2.57E-4	1.75E-6	1.52E-5	2.70E-7	-9.63E-5	1.78E-4
AP	kg SO2-eq	8.86E-4	5.89E-5	1.48E-4	1.09E-3	1.26E-5	7.78E-5	6.21E-7	-3.67E-4	8.17E-4
EP	kg PO4 3−-eq	8.94E-5	1.18E-5	1.91E-5	1.20E-4	2.51E-6	1.41E-5	2.70E-7	-4.03E-5	9.69E-5
HTP	kg 1,4-DB-eq	4.80E-2	5.86E-3	2.64E-2	8.03E-2	1.25E-3	3.05E-2	9.27E-5	-1.94E-2	9.27E-2
FAETP	kg 1,4-DB-eq	1.40E-3	1.72E-4	9.52E-4	2.53E-3	3.66E-5	8.59E-4	1.00E-4	-5.63E-4	2.96E-3
MAETP	kg 1,4-DB-eq	3.39E+0	6.13E-1	2.64E+0	6.64E+0	1.31E-1	1.89E+0	9.99E-2	-1.17E+0	7.59E+0
TETP	kg 1,4-DB-eq	2.25E-4	2.07E-5	1.36E-3	1.61E-3	4.43E-6	9.06E-5	1.52E-7	-1.46E-4	1.56E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.82E-1	1.38E-2	2.58E-2	3.21E-1	2.95E-3	1.31E-1	1.39E-3	-1.59E-1	2.97E-1
GWP-f	kg CO2 eq	2.82E-1	1.38E-2	2.08E-2	3.16E-1	2.95E-3	1.27E-1	1.39E-3	-1.67E-1	2.81E-1
GWP-b	kg CO2 eq	-9.56E-5	8.38E-6	4.66E-3	4.57E-3	1.79E-6	3.55E-3	1.21E-6	7.91E-3	1.60E-2
GWP-luluc	kg CO2 eq	1.45E-4	4.88E-6	3.23E-4	4.73E-4	1.04E-6	1.71E-5	2.41E-8	-8.63E-5	4.05E-4
ODP	kg CFC11 eq	6.74E-9	3.18E-9	2.06E-8	3.05E-8	6.79E-10	2.37E-9	3.49E-11	-8.28E-9	2.53E-8
AP	mol H+ eq	1.07E-3	7.86E-5	1.88E-4	1.34E-3	1.68E-5	1.01E-4	8.34E-7	-4.45E-4	1.01E-3
EP-fw	kg P eq	5.43E-6	1.14E-7	6.84E-7	6.23E-6	2.43E-8	4.97E-7	1.10E-9	-2.29E-6	4.46E-6
EP-m	kg N eq	1.88E-4	2.81E-5	3.49E-5	2.51E-4	6.01E-6	3.06E-5	5.38E-7	-8.35E-5	2.04E-4
EP-T	mol N eq	2.10E-3	3.10E-4	4.30E-4	2.84E-3	6.62E-5	3.37E-4	3.38E-6	-9.28E-4	2.32E-3
POCP	kg NMVOC eq	9.16E-4	8.86E-5	1.00E-4	1.10E-3	1.89E-5	1.05E-4	1.27E-6	-3.98E-4	8.32E-4
ADP-mm	kg Sb eq	4.23E-6	3.57E-7	1.58E-6	6.17E-6	7.63E-8	3.86E-7	8.45E-10	-9.77E-7	5.65E-6
ADP-f	MJ	9.35E+0	2.12E-1	5.20E+0	1.48E+1	4.53E-2	3.03E-1	2.55E-3	-4.84E+0	1.03E+1
WDP	m3 depriv.	1.98E-1	6.50E-4	9.12E-2	2.89E-1	1.39E-4	5.82E-3	1.45E-5	-8.89E-2	2.07E-1
PM	disease inc.	9.52E-9	1.25E-9	1.56E-9	1.23E-8	2.66E-10	1.62E-9	1.75E-11	-4.09E-9	1.01E-8
IR	kBq U-235 eq	5.79E-3	9.26E-4	6.09E-2	6.76E-2	1.98E-4	9.28E-4	1.18E-5	-2.67E-3	6.61E-2
ETP-fw	CTUe	2.94E+0	1.72E-1	1.75E+0	4.86E+0	3.67E-2	3.55E-1	2.13E-3	-1.21E+0	4.05E+0
HTP-c	CTUh	7.28E-11	6.12E-12	3.79E-11	1.17E-10	1.31E-12	4.65E-11	6.35E-14	-2.96E-11	1.35E-10
HTP-nc	CTUh	2.01E-9	2.05E-10	1.19E-9	3.41E-9	4.38E-11	5.44E-10	1.38E-12	-8.41E-10	3.16E-9
SQP	Pt	8.36E-1	1.81E-1	1.43E+0	2.44E+0	3.87E-2	2.40E-1	6.53E-3	-1.63E+0	1.10E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.39E-1	3.04E-3	7.35E-1	9.77E-1	6.49E-4	1.47E-2	9.77E-5	-3.28E-1	6.64E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.39E-1	3.04E-3	7.35E-1	9.77E-1	6.49E-4	1.47E-2	9.77E-5	-3.28E-1	6.64E-1
PENRE	MJ	1.00E+1	2.25E-1	5.22E+0	1.55E+1	4.80E-2	3.23E-1	2.70E-3	-5.23E+0	1.06E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.00E+1	2.25E-1	5.22E+0	1.55E+1	4.80E-2	3.23E-1	2.70E-3	-5.23E+0	1.06E+1
PET	MJ	1.03E+1	2.28E-1	5.96E+0	1.65E+1	4.87E-2	3.38E-1	2.80E-3	-5.56E+0	1.13E+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	3.35E-3	2.40E-5	2.93E-3	6.30E-3	5.12E-6	1.78E-4	3.13E-6	-1.47E-3	5.01E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.44E-6	5.42E-7	1.07E-7	2.08E-6	1.16E-7	5.12E-7	3.09E-9	-1.60E-6	1.11E-6
NHWD	kg	1.45E-2	1.31E-2	3.04E-3	3.07E-2	2.80E-3	1.65E-2	1.12E-2	-4.17E-3	5.71E-2
RWD	kg	5.02E-6	1.44E-6	1.59E-7	6.62E-6	3.08E-7	1.19E-6	1.66E-8	-2.49E-6	5.64E-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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