Environmental Profile

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

Ecochain v3.5.80

Product:	3085544 - EK PP-RCT Reducer I/E GN 40x25
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	8.26E-7	7.19E-8	2.92E-7	1.19E-6	1.43E-8	7.05E-8	1.60E-10	-1.80E-7	1.09E-6
ADPF	kg Sb-eq	7.22E-4	2.02E-5	2.17E-5	7.64E-4	4.03E-6	2.69E-5	2.21E-7	-4.01E-4	3.94E-4
GWP	kg CO2-eq	4.27E-2	2.76E-3	3.92E-3	4.94E-2	5.48E-4	1.70E-2	2.22E-4	-2.59E-2	4.13E-2
ODP	kg CFC-11-eq	1.13E-9	5.11E-10	6.80E-9	8.44E-9	1.02E-10	3.60E-10	5.28E-12	-1.04E-9	7.87E-9
POCP	kg ethene-eq	3.49E-5	1.65E-6	2.85E-6	3.94E-5	3.29E-7	2.70E-6	5.07E-8	-1.72E-5	2.53E-5
AP	kg SO2-eq	1.39E-4	1.19E-5	2.72E-5	1.78E-4	2.36E-6	1.38E-5	1.17E-7	-6.56E-5	1.29E-4
EP	kg PO4 3−-eq	1.39E-5	2.37E-6	3.49E-6	1.98E-5	4.71E-7	2.45E-6	5.02E-8	-7.02E-6	1.57E-5
HTP	kg 1,4-DB-eq	7.25E-3	1.18E-3	4.77E-3	1.32E-2	2.35E-4	5.45E-3	1.73E-5	-3.36E-3	1.55E-2
FAETP	kg 1,4-DB-eq	2.39E-4	3.45E-5	1.73E-4	4.46E-4	6.87E-6	1.22E-4	1.85E-5	-9.95E-5	4.94E-4
MAETP	kg 1,4-DB-eq	5.13E-1	1.23E-1	4.83E-1	1.12E+0	2.45E-2	2.81E-1	1.85E-2	-2.06E-1	1.24E+0
TETP	kg 1,4-DB-eq	3.37E-5	4.18E-6	2.52E-4	2.90E-4	8.31E-7	1.68E-5	2.88E-8	-2.56E-5	2.82E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.47E-2	2.78E-3	4.64E-3	5.22E-2	5.53E-4	1.77E-2	2.60E-4	-2.55E-2	4.52E-2
GWP-f	kg CO2 eq	4.45E-2	2.78E-3	3.75E-3	5.11E-2	5.53E-4	1.71E-2	2.60E-4	-2.68E-2	4.21E-2
GWP-b	kg CO2 eq	1.83E-4	1.69E-6	8.35E-4	1.02E-3	3.36E-7	6.20E-4	2.25E-7	1.38E-3	3.02E-3
GWP-luluc	kg CO2 eq	2.10E-5	9.83E-7	5.97E-5	8.16E-5	1.96E-7	3.15E-6	4.64E-9	-1.52E-5	6.98E-5
ODP	kg CFC11 eq	1.11E-9	6.40E-10	3.79E-9	5.54E-9	1.27E-10	4.26E-10	6.55E-12	-1.10E-9	5.00E-9
AP	mol H+ eq	1.69E-4	1.58E-5	3.44E-5	2.19E-4	3.15E-6	1.78E-5	1.57E-7	-7.93E-5	1.61E-4
EP-fw	kg P eq	7.71E-7	2.29E-8	1.25E-7	9.19E-7	4.55E-9	9.13E-8	2.10E-10	-4.11E-7	6.04E-7
EP-m	kg N eq	2.88E-5	5.66E-6	6.35E-6	4.08E-5	1.13E-6	5.24E-6	1.00E-7	-1.44E-5	3.28E-5
EP-T	mol N eq	3.25E-4	6.24E-5	7.89E-5	4.67E-4	1.24E-5	5.77E-5	6.36E-7	-1.60E-4	3.77E-4
POCP	kg NMVOC eq	1.39E-4	1.78E-5	1.83E-5	1.75E-4	3.55E-6	1.82E-5	2.38E-7	-7.00E-5	1.27E-4
ADP-mm	kg Sb eq	8.26E-7	7.18E-8	2.92E-7	1.19E-6	1.43E-8	7.05E-8	1.60E-10	-1.80E-7	1.09E-6
ADP-f	MJ	1.51E+0	4.26E-2	9.61E-1	2.52E+0	8.49E-3	5.54E-2	4.79E-4	-8.30E-1	1.75E+0
WDP	m3 depriv.	3.11E-2	1.31E-4	1.67E-2	4.80E-2	2.60E-5	1.07E-3	3.15E-6	-1.62E-2	3.29E-2
PM	disease inc.	1.51E-9	2.51E-10	2.83E-10	2.04E-9	4.99E-11	2.91E-10	3.29E-12	-7.42E-10	1.64E-9
IR	kBq U-235 eq	8.74E-4	1.86E-4	1.13E-2	1.23E-2	3.71E-5	1.69E-4	2.21E-6	-4.69E-4	1.21E-2
ETP-fw	CTUe	4.56E-1	3.46E-2	3.21E-1	8.12E-1	6.89E-3	6.37E-2	4.01E-4	-2.12E-1	6.71E-1
HTP-c	CTUh	1.18E-11	1.23E-12	6.91E-12	2.00E-11	2.45E-13	8.07E-12	1.22E-14	-5.15E-12	2.31E-11
HTP-nc	CTUh	3.25E-10	4.13E-11	2.19E-10	5.85E-10	8.21E-12	9.49E-11	2.61E-13	-1.51E-10	5.38E-10
SQP	Pt	1.22E-1	3.65E-2	2.63E-1	4.22E-1	7.26E-3	4.39E-2	1.23E-3	-2.85E-1	1.89E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.53E-2	6.12E-4	1.36E-1	1.72E-1	1.22E-4	2.70E-3	1.81E-5	-5.79E-2	1.17E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.53E-2	6.12E-4	1.36E-1	1.72E-1	1.22E-4	2.70E-3	1.81E-5	-5.79E-2	1.17E-1
PENRE	MJ	1.62E+0	4.53E-2	9.64E-1	2.63E+0	9.01E-3	5.90E-2	5.08E-4	-8.94E-1	1.81E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.62E+0	4.53E-2	9.64E-1	2.63E+0	9.01E-3	5.90E-2	5.08E-4	-8.94E-1	1.81E+0
PET	MJ	1.66E+0	4.59E-2	1.10E+0	2.80E+0	9.13E-3	6.17E-2	5.26E-4	-9.52E-1	1.92E+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	4.97E-4	4.82E-6	5.37E-4	1.04E-3	9.60E-7	3.18E-5	5.87E-7	-2.65E-4	8.07E-4
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.44E-7	1.09E-7	1.79E-8	3.71E-7	2.17E-8	9.20E-8	5.83E-10	-2.13E-7	2.73E-7
NHWD	kg	2.21E-3	2.64E-3	5.10E-4	5.36E-3	5.26E-4	2.75E-3	2.10E-3	-7.41E-4	1.00E-2
RWD	kg	7.71E-7	2.90E-7	2.67E-8	1.09E-6	5.77E-8	2.15E-7	3.12E-9	-4.27E-7	9.36E-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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