

Environmental Profile

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

Ecochain v3.5.80



Product: 3079586 - EK PP-RCT Reducer I/E GN 110x90
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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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

This document and supporting material contain confidential and proprietary business information of Wavin - CZ - Kostelec - Verified. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - CZ - Kostelec - Verified.

Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.05	0	0.01	0.07	0	0.02	0	-0.03	0.06
ADPE	kg Sb-eq	9.88E-6	1.00E-6	4.02E-6	1.49E-5	2.07E-7	1.01E-6	2.29E-9	-2.58E-6	1.36E-5
ADPF	kg Sb-eq	1.06E-2	2.83E-4	3.02E-4	1.12E-2	5.83E-5	3.88E-4	3.19E-6	-5.81E-3	5.83E-3
GWP	kg CO2-eq	6.14E-1	3.85E-2	5.46E-2	7.07E-1	7.94E-3	2.46E-1	3.22E-3	-3.75E-1	5.90E-1
ODP	kg CFC-11-eq	1.45E-8	7.14E-9	9.37E-8	1.15E-7	1.47E-9	5.16E-9	7.63E-11	-1.50E-8	1.07E-7
POCP	kg ethene-eq	5.09E-4	2.31E-5	3.94E-5	5.71E-4	4.76E-6	3.89E-5	7.33E-7	-2.48E-4	3.68E-4
AP	kg SO2-eq	1.95E-3	1.66E-4	3.76E-4	2.49E-3	3.42E-5	1.98E-4	1.68E-6	-9.37E-4	1.79E-3
EP	kg PO4 3--eq	1.89E-4	3.31E-5	4.83E-5	2.70E-4	6.82E-6	3.51E-5	7.33E-7	-9.79E-5	2.15E-4
HTP	kg 1,4-DB-eq	9.90E-2	1.65E-2	6.63E-2	1.82E-1	3.40E-3	7.87E-2	2.52E-4	-4.77E-2	2.16E-1
FAETP	kg 1,4-DB-eq	2.88E-3	4.82E-4	2.39E-3	5.76E-3	9.95E-5	1.76E-3	2.73E-4	-1.34E-3	6.55E-3
MAETP	kg 1,4-DB-eq	6.64E+0	1.72E+0	6.67E+0	1.50E+1	3.55E-1	4.03E+0	2.72E-1	-2.92E+0	1.68E+1
TETP	kg 1,4-DB-eq	4.53E-4	5.83E-5	3.47E-3	3.98E-3	1.20E-5	2.41E-4	4.12E-7	-3.35E-4	3.90E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.43E-1	3.88E-2	6.46E-2	7.47E-1	8.01E-3	2.55E-1	3.77E-3	-3.72E-1	6.42E-1
GWP-f	kg CO2 eq	6.41E-1	3.88E-2	5.22E-2	7.32E-1	8.00E-3	2.47E-1	3.77E-3	-3.88E-1	6.03E-1
GWP-b	kg CO2 eq	2.62E-3	2.36E-5	1.16E-2	1.43E-2	4.86E-6	7.38E-3	3.28E-6	1.63E-2	3.80E-2
GWP-luluc	kg CO2 eq	2.72E-4	1.37E-5	8.22E-4	1.11E-3	2.83E-6	4.55E-5	6.52E-8	-1.95E-4	9.62E-4
ODP	kg CFC11 eq	1.40E-8	8.94E-9	5.23E-8	7.53E-8	1.84E-9	6.11E-9	9.47E-11	-1.58E-8	6.76E-8
AP	mol H+ eq	2.35E-3	2.21E-4	4.75E-4	3.05E-3	4.56E-5	2.56E-4	2.26E-6	-1.13E-3	2.22E-3
EP-fw	kg P eq	1.06E-5	3.19E-7	1.73E-6	1.26E-5	6.58E-8	1.32E-6	2.97E-9	-5.63E-6	8.40E-6
EP-m	kg N eq	4.03E-4	7.91E-5	8.80E-5	5.71E-4	1.63E-5	7.53E-5	1.46E-6	-2.05E-4	4.59E-4
EP-T	mol N eq	4.53E-3	8.72E-4	1.09E-3	6.49E-3	1.80E-4	8.29E-4	9.18E-6	-2.28E-3	5.23E-3
POCP	kg NMVOC eq	2.00E-3	2.49E-4	2.53E-4	2.50E-3	5.14E-5	2.61E-4	3.44E-6	-1.00E-3	1.81E-3
ADP-mm	kg Sb eq	9.88E-6	1.00E-6	4.02E-6	1.49E-5	2.07E-7	1.01E-6	2.29E-9	-2.58E-6	1.35E-5
ADP-f	MJ	2.22E+1	5.96E-1	1.32E+1	3.60E+1	1.23E-1	7.98E-1	6.91E-3	-1.20E+1	2.50E+1
WDP	m3 depriv.	4.47E-1	1.83E-3	2.31E-1	6.80E-1	3.77E-4	1.55E-2	3.84E-5	-2.29E-1	4.67E-1
PM	disease inc.	2.10E-8	3.50E-9	3.92E-9	2.85E-8	7.22E-10	4.19E-9	4.75E-11	-1.04E-8	2.30E-8
IR	kBq U-235 eq	1.23E-2	2.60E-3	1.55E-1	1.70E-1	5.37E-4	2.43E-3	3.20E-5	-6.57E-3	1.66E-1
ETP-fw	CTUe	5.75E+0	4.84E-1	4.43E+0	1.07E+1	9.97E-2	9.15E-1	5.79E-3	-2.79E+0	8.90E+0
HTP-c	CTUh	1.57E-10	1.72E-11	9.57E-11	2.70E-10	3.55E-12	1.12E-10	1.72E-13	-7.26E-11	3.14E-10
HTP-nc	CTUh	4.38E-9	5.77E-10	3.03E-9	7.98E-9	1.19E-10	1.36E-9	3.74E-12	-2.11E-9	7.35E-9
SQP	Pt	1.55E+0	5.10E-1	3.63E+0	5.69E+0	1.05E-1	6.34E-1	1.77E-2	-3.48E+0	2.97E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.76E-1	8.55E-3	1.87E+0	2.36E+0	1.76E-3	3.90E-2	2.66E-4	-7.19E-1	1.68E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.76E-1	8.55E-3	1.87E+0	2.36E+0	1.76E-3	3.90E-2	2.66E-4	-7.19E-1	1.68E+0
PENRE	MJ	2.38E+1	6.32E-1	1.33E+1	3.77E+1	1.30E-1	8.50E-1	7.34E-3	-1.29E+1	2.58E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.38E+1	6.32E-1	1.33E+1	3.77E+1	1.30E-1	8.50E-1	7.34E-3	-1.29E+1	2.58E+1
PET	MJ	2.43E+1	6.41E-1	1.52E+1	4.01E+1	1.32E-1	8.89E-1	7.60E-3	-1.37E+1	2.75E+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	6.98E-3	6.74E-5	7.41E-3	1.45E-2	1.39E-5	4.59E-4	8.51E-6	-3.71E-3	1.12E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.14E-6	1.52E-6	2.56E-7	4.92E-6	3.14E-7	1.32E-6	8.36E-9	-3.06E-6	3.49E-6
NHWD	kg	2.88E-2	3.69E-2	7.30E-3	7.30E-2	7.61E-3	3.96E-2	3.04E-2	-1.05E-2	1.40E-1
RWD	kg	1.08E-5	4.05E-6	3.83E-7	1.52E-5	8.35E-7	3.09E-6	4.51E-8	-5.98E-6	1.32E-5
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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777