

Environmental Profile

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

Ecochain v3.5.80



Product: 3084300 - EK PP-RCT Reducer I/E GY 50x32
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	0.01	0	0	0.01	0	0	0	-0	0.01
ADPE	kg Sb-eq	1.26E-6	1.25E-7	4.53E-7	1.84E-6	2.45E-8	1.26E-7	2.72E-10	-3.23E-7	1.66E-6
ADPF	kg Sb-eq	1.31E-3	3.52E-5	3.54E-5	1.38E-3	6.90E-6	4.73E-5	3.78E-7	-7.13E-4	7.24E-4
GWP	kg CO2-eq	7.82E-2	4.80E-3	6.38E-3	8.94E-2	9.40E-4	3.22E-2	3.81E-4	-4.75E-2	7.54E-2
ODP	kg CFC-11-eq	2.11E-9	8.89E-10	1.05E-8	1.35E-8	1.74E-10	6.46E-10	9.04E-12	-2.11E-9	1.23E-8
POCP	kg ethene-eq	6.46E-5	2.88E-6	4.54E-6	7.20E-5	5.64E-7	4.85E-6	8.68E-8	-3.07E-5	4.68E-5
AP	kg SO2-eq	2.52E-4	2.06E-5	4.27E-5	3.16E-4	4.05E-6	2.47E-5	2.00E-7	-1.21E-4	2.23E-4
EP	kg PO4 3--eq	2.64E-5	4.12E-6	5.53E-6	3.61E-5	8.08E-7	4.43E-6	8.66E-8	-1.44E-5	2.70E-5
HTP	kg 1,4-DB-eq	1.34E-2	2.05E-3	7.69E-3	2.31E-2	4.02E-4	9.60E-3	2.98E-5	-6.45E-3	2.67E-2
FAETP	kg 1,4-DB-eq	4.61E-4	6.01E-5	2.77E-4	7.98E-4	1.18E-5	2.28E-4	3.22E-5	-2.31E-4	8.40E-4
MAETP	kg 1,4-DB-eq	9.28E-1	2.15E-1	7.60E-1	1.90E+0	4.21E-2	5.31E-1	3.21E-2	-3.97E-1	2.11E+0
TETP	kg 1,4-DB-eq	6.72E-5	7.27E-6	3.90E-4	4.65E-4	1.42E-6	2.90E-5	4.89E-8	-6.40E-5	4.31E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.17E-2	4.84E-3	7.54E-3	9.41E-2	9.48E-4	3.42E-2	4.46E-4	-4.47E-2	8.51E-2
GWP-f	kg CO2 eq	8.14E-2	4.83E-3	6.08E-3	9.24E-2	9.48E-4	3.23E-2	4.47E-4	-4.91E-2	7.70E-2
GWP-b	kg CO2 eq	2.62E-4	2.94E-6	1.37E-3	1.63E-3	5.75E-7	1.96E-3	3.88E-7	4.42E-3	8.02E-3
GWP-luluc	kg CO2 eq	4.90E-5	1.71E-6	9.23E-5	1.43E-4	3.35E-7	5.47E-6	7.76E-9	-4.05E-5	1.08E-4
ODP	kg CFC11 eq	2.09E-9	1.11E-9	5.89E-9	9.09E-9	2.18E-10	7.65E-10	1.12E-11	-2.22E-9	7.86E-9
AP	mol H+ eq	3.07E-4	2.75E-5	5.39E-5	3.88E-4	5.40E-6	3.19E-5	2.68E-7	-1.47E-4	2.79E-4
EP-fw	kg P eq	1.52E-6	3.98E-8	1.98E-7	1.76E-6	7.80E-9	1.59E-7	3.54E-10	-8.86E-7	1.04E-6
EP-m	kg N eq	5.48E-5	9.85E-6	1.01E-5	7.48E-5	1.93E-6	9.56E-6	1.73E-7	-2.74E-5	5.90E-5
EP-T	mol N eq	6.08E-4	1.09E-4	1.24E-4	8.40E-4	2.13E-5	1.05E-4	1.09E-6	-3.06E-4	6.62E-4
POCP	kg NMVOC eq	2.58E-4	3.10E-5	2.89E-5	3.18E-4	6.08E-6	3.30E-5	4.08E-7	-1.28E-4	2.30E-4
ADP-mm	kg Sb eq	1.26E-6	1.25E-7	4.53E-7	1.84E-6	2.45E-8	1.26E-7	2.72E-10	-3.23E-7	1.66E-6
ADP-f	MJ	2.74E+0	7.42E-2	1.49E+0	4.31E+0	1.45E-2	9.73E-2	8.19E-4	-1.47E+0	2.94E+0
WDP	m3 depriv.	5.63E-2	2.28E-4	2.63E-2	8.28E-2	4.46E-5	1.86E-3	4.71E-6	-3.08E-2	5.40E-2
PM	disease inc.	2.81E-9	4.36E-10	4.52E-10	3.70E-9	8.55E-11	5.20E-10	5.63E-12	-1.47E-9	2.84E-9
IR	kBq U-235 eq	1.65E-3	3.24E-4	1.74E-2	1.94E-2	6.36E-5	2.99E-4	3.79E-6	-9.41E-4	1.88E-2
ETP-fw	CTUe	1.04E+0	6.03E-2	5.01E-1	1.60E+0	1.18E-2	1.14E-1	6.86E-4	-5.21E-1	1.21E+0
HTP-c	CTUh	2.10E-11	2.14E-12	1.10E-11	3.41E-11	4.20E-13	1.41E-11	2.04E-14	-1.02E-11	3.85E-11
HTP-nc	CTUh	5.85E-10	7.18E-11	3.43E-10	1.00E-9	1.41E-11	1.68E-10	4.44E-13	-3.01E-10	8.81E-10
SQP	Pt	2.98E-1	6.35E-2	4.08E-1	7.70E-1	1.24E-2	7.68E-2	2.10E-3	-8.59E-1	1.98E-3

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.09E-2	1.06E-3	2.10E-1	2.92E-1	2.09E-4	4.71E-3	3.14E-5	-1.66E-1	1.31E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.09E-2	1.06E-3	2.10E-1	2.92E-1	2.09E-4	4.71E-3	3.14E-5	-1.66E-1	1.31E-1
PENRE	MJ	2.94E+0	7.88E-2	1.49E+0	4.52E+0	1.54E-2	1.04E-1	8.69E-4	-1.59E+0	3.05E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.94E+0	7.88E-2	1.49E+0	4.52E+0	1.54E-2	1.04E-1	8.69E-4	-1.59E+0	3.05E+0
PET	MJ	3.03E+0	7.99E-2	1.70E+0	4.81E+0	1.57E-2	1.08E-1	9.01E-4	-1.76E+0	3.18E+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	9.18E-4	8.40E-6	8.42E-4	1.77E-3	1.65E-6	5.59E-5	1.01E-6	-5.35E-4	1.29E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.38E-7	1.90E-7	3.30E-8	6.61E-7	3.72E-8	1.64E-7	9.92E-10	-4.28E-7	4.35E-7
NHWD	kg	4.11E-3	4.60E-3	9.38E-4	9.65E-3	9.02E-4	4.93E-3	3.60E-3	-1.45E-3	1.76E-2
RWD	kg	1.46E-6	5.05E-7	4.94E-8	2.02E-6	9.89E-8	3.83E-7	5.34E-9	-8.67E-7	1.64E-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



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