

Environmental Profile

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

Ecochain v3.5.80



Product: 3079612 - EK PP-RCT ELBOW 90° GN 110
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	0.18	0.01	0.04	0.24	0	0.07	0	-0.1	0.21
ADPE	kg Sb-eq	3.30E-5	3.17E-6	1.37E-5	4.99E-5	7.03E-7	3.43E-6	7.77E-9	-8.73E-6	4.53E-5
ADPF	kg Sb-eq	3.64E-2	8.93E-4	1.03E-3	3.84E-2	1.98E-4	1.32E-3	1.08E-5	-1.99E-2	2.00E-2
GWP	kg CO2-eq	2.11E+0	1.22E-1	1.85E-1	2.42E+0	2.70E-2	8.62E-1	1.09E-2	-1.29E+0	2.03E+0
ODP	kg CFC-11-eq	4.89E-8	2.25E-8	3.18E-7	3.89E-7	5.00E-9	1.75E-8	2.59E-10	-5.18E-8	3.60E-7
POCP	kg ethene-eq	1.76E-3	7.30E-5	1.34E-4	1.97E-3	1.62E-5	1.32E-4	2.49E-6	-8.42E-4	1.27E-3
AP	kg SO2-eq	6.68E-3	5.23E-4	1.28E-3	8.48E-3	1.16E-4	6.73E-4	5.72E-6	-3.17E-3	6.11E-3
EP	kg PO4 3--eq	6.42E-4	1.04E-4	1.64E-4	9.11E-4	2.32E-5	1.20E-4	2.49E-6	-3.26E-4	7.29E-4
HTP	kg 1,4-DB-eq	3.40E-1	5.20E-2	2.25E-1	6.17E-1	1.15E-2	2.68E-1	8.57E-4	-1.61E-1	7.36E-1
FAETP	kg 1,4-DB-eq	9.52E-3	1.52E-3	8.13E-3	1.92E-2	3.38E-4	6.13E-3	9.28E-4	-4.34E-3	2.22E-2
MAETP	kg 1,4-DB-eq	2.27E+1	5.44E+0	2.26E+1	5.08E+1	1.21E+0	1.39E+1	9.26E-1	-9.84E+0	5.70E+1
TETP	kg 1,4-DB-eq	1.54E-3	1.84E-4	1.18E-2	1.35E-2	4.09E-5	8.20E-4	1.40E-6	-1.07E-3	1.33E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.21E+0	1.23E-1	2.19E-1	2.55E+0	2.72E-2	8.87E-1	1.28E-2	-1.28E+0	2.19E+0
GWP-f	kg CO2 eq	2.20E+0	1.23E-1	1.77E-1	2.50E+0	2.72E-2	8.65E-1	1.28E-2	-1.33E+0	2.07E+0
GWP-b	kg CO2 eq	8.03E-3	7.44E-5	3.95E-2	4.77E-2	1.65E-5	2.18E-2	1.11E-5	4.81E-2	1.18E-1
GWP-luluc	kg CO2 eq	9.04E-4	4.34E-5	2.79E-3	3.74E-3	9.62E-6	1.55E-4	2.21E-7	-6.12E-4	3.29E-3
ODP	kg CFC11 eq	4.71E-8	2.82E-8	1.77E-7	2.53E-7	6.27E-9	2.07E-8	3.22E-10	-5.47E-8	2.25E-7
AP	mol H+ eq	8.07E-3	6.98E-4	1.61E-3	1.04E-2	1.55E-4	8.70E-4	7.68E-6	-3.83E-3	7.58E-3
EP-fw	kg P eq	3.64E-5	1.01E-6	5.86E-6	4.33E-5	2.24E-7	4.48E-6	1.01E-8	-1.85E-5	2.95E-5
EP-m	kg N eq	1.38E-3	2.50E-4	2.99E-4	1.93E-3	5.54E-5	2.56E-4	4.97E-6	-6.93E-4	1.55E-3
EP-T	mol N eq	1.55E-2	2.75E-3	3.70E-3	2.19E-2	6.11E-4	2.82E-3	3.12E-5	-7.70E-3	1.77E-2
POCP	kg NMVOC eq	6.88E-3	7.87E-4	8.58E-4	8.53E-3	1.75E-4	8.89E-4	1.17E-5	-3.40E-3	6.20E-3
ADP-mm	kg Sb eq	3.30E-5	3.17E-6	1.37E-5	4.99E-5	7.03E-7	3.43E-6	7.77E-9	-8.73E-6	4.53E-5
ADP-f	MJ	7.63E+1	1.88E+0	4.49E+1	1.23E+2	4.17E-1	2.71E+0	2.35E-2	-4.10E+1	8.53E+1
WDP	m3 depriv.	1.54E+0	5.77E-3	7.83E-1	2.33E+0	1.28E-3	5.25E-2	1.28E-4	-7.68E-1	1.61E+0
PM	disease inc.	7.18E-8	1.11E-8	1.33E-8	9.62E-8	2.45E-9	1.42E-8	1.62E-10	-3.47E-8	7.83E-8
IR	kBq U-235 eq	4.21E-2	8.22E-3	5.26E-1	5.76E-1	1.82E-3	8.24E-3	1.09E-4	-2.19E-2	5.65E-1
ETP-fw	CTUe	1.89E+1	1.53E+0	1.50E+1	3.54E+1	3.39E-1	3.11E+0	1.97E-2	-8.94E+0	3.00E+1
HTP-c	CTUh	5.36E-10	5.44E-11	3.25E-10	9.15E-10	1.21E-11	3.82E-10	5.81E-13	-2.44E-10	1.07E-9
HTP-nc	CTUh	1.49E-8	1.82E-9	1.03E-8	2.70E-8	4.04E-10	4.62E-9	1.27E-11	-7.04E-9	2.50E-8
SQP	Pt	5.09E+0	1.61E+0	1.23E+1	1.90E+1	3.57E-1	2.15E+0	6.02E-2	-1.05E+1	1.11E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.59E+0	2.70E-2	6.35E+0	7.96E+0	5.99E-3	1.33E-1	9.04E-4	-2.20E+0	5.90E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.59E+0	2.70E-2	6.35E+0	7.96E+0	5.99E-3	1.33E-1	9.04E-4	-2.20E+0	5.90E+0
PENRE	MJ	8.19E+1	2.00E+0	4.51E+1	1.29E+2	4.43E-1	2.89E+0	2.49E-2	-4.42E+1	8.81E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.19E+1	2.00E+0	4.51E+1	1.29E+2	4.43E-1	2.89E+0	2.49E-2	-4.42E+1	8.81E+1
PET	MJ	8.35E+1	2.02E+0	5.14E+1	1.37E+2	4.49E-1	3.02E+0	2.58E-2	-4.64E+1	9.40E+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	2.41E-2	2.13E-4	2.52E-2	4.95E-2	4.72E-5	1.56E-3	2.89E-5	-1.23E-2	3.88E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.06E-5	4.81E-6	8.71E-7	1.62E-5	1.07E-6	4.48E-6	2.84E-8	-1.06E-5	1.12E-5
NHWD	kg	9.79E-2	1.17E-1	2.49E-2	2.39E-1	2.59E-2	1.36E-1	1.03E-1	-3.51E-2	4.69E-1
RWD	kg	3.68E-5	1.28E-5	1.30E-6	5.09E-5	2.84E-6	1.05E-5	1.53E-7	-2.00E-5	4.43E-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