Environmental Profile

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

Ecochain v3.5.80

Product:	3084029 - EK PP-RCT Tee Reduced GN 50x25x50
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	0.02	0	0.01	0	-0.01	0.02
ADPE	kg Sb-eq	3.56E-6	3.31E-7	1.37E-6	5.26E-6	7.08E-8	3.51E-7	7.85E-10	-8.99E-7	4.79E-6
ADPF	kg Sb-eq	3.64E-3	9.31E-5	1.04E-4	3.83E-3	1.99E-5	1.34E-4	1.09E-6	-2.00E-3	1.99E-3
GWP	kg CO2-eq	2.13E-1	1.27E-2	1.87E-2	2.44E-1	2.72E-3	8.51E-2	1.10E-3	-1.30E-1	2.04E-1
ODP	kg CFC-11-eq	5.36E-9	2.35E-9	3.19E-8	3.96E-8	5.04E-10	1.80E-9	2.61E-11	-5.32E-9	3.66E-8
POCP	kg ethene-eq	1.75E-4	7.61E-6	1.35E-5	1.96E-4	1.63E-6	1.35E-5	2.51E-7	-8.58E-5	1.26E-4
AP	kg SO2-eq	6.81E-4	5.46E-5	1.28E-4	8.64E-4	1.17E-5	6.87E-5	5.77E-7	-3.29E-4	6.16E-4
EP	kg PO4 3−-eq	6.80E-5	1.09E-5	1.65E-5	9.54E-5	2.33E-6	1.22E-5	2.50E-7	-3.60E-5	7.42E-5
HTP	kg 1,4-DB-eq	3.51E-2	5.42E-3	2.27E-2	6.32E-2	1.16E-3	2.71E-2	8.60E-5	-1.70E-2	7.46E-2
FAETP	kg 1,4-DB-eq	1.11E-3	1.59E-4	8.19E-4	2.09E-3	3.40E-5	6.10E-4	9.28E-5	-5.25E-4	2.30E-3
MAETP	kg 1,4-DB-eq	2.40E+0	5.68E-1	2.27E+0	5.24E+0	1.22E-1	1.41E+0	9.27E-2	-1.04E+0	5.82E+0
TETP	kg 1,4-DB-eq	1.66E-4	1.92E-5	1.18E-3	1.37E-3	4.12E-6	8.29E-5	1.41E-7	-1.37E-4	1.32E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.23E-1	1.28E-2	2.21E-2	2.58E-1	2.74E-3	8.90E-2	1.29E-3	-1.26E-1	2.25E-1
GWP-f	kg CO2 eq	2.22E-1	1.28E-2	1.79E-2	2.53E-1	2.74E-3	8.55E-2	1.29E-3	-1.34E-1	2.08E-1
GWP-b	kg CO2 eq	9.09E-4	7.76E-6	3.99E-3	4.91E-3	1.66E-6	3.56E-3	1.12E-6	7.95E-3	1.64E-2
GWP-luluc	kg CO2 eq	1.08E-4	4.52E-6	2.80E-4	3.92E-4	9.69E-7	1.56E-5	2.25E-8	-8.32E-5	3.25E-4
ODP	kg CFC11 eq	5.23E-9	2.95E-9	1.78E-8	2.60E-8	6.31E-10	2.13E-9	3.24E-11	-5.59E-9	2.32E-8
AP	mol H+ eq	8.26E-4	7.28E-5	1.62E-4	1.06E-3	1.56E-5	8.88E-5	7.75E-7	-3.99E-4	7.67E-4
EP-fw	kg P eq	3.82E-6	1.05E-7	5.89E-7	4.52E-6	2.25E-8	4.53E-7	1.02E-9	-2.13E-6	2.86E-6
EP-m	kg N eq	1.43E-4	2.61E-5	3.01E-5	1.99E-4	5.58E-6	2.62E-5	4.99E-7	-7.28E-5	1.59E-4
EP-T	mol N eq	1.60E-3	2.87E-4	3.72E-4	2.26E-3	6.15E-5	2.89E-4	3.14E-6	-8.11E-4	1.80E-3
POCP	kg NMVOC eq	6.95E-4	8.21E-5	8.62E-5	8.63E-4	1.76E-5	9.09E-5	1.18E-6	-3.51E-4	6.22E-4
ADP-mm	kg Sb eq	3.56E-6	3.31E-7	1.37E-6	5.26E-6	7.08E-8	3.51E-7	7.85E-10	-8.99E-7	4.79E-6
ADP-f	MJ	7.62E+0	1.96E-1	4.50E+0	1.23E+1	4.20E-2	2.75E-1	2.37E-3	-4.13E+0	8.50E+0
WDP	m3 depriv.	1.55E-1	6.02E-4	7.87E-2	2.34E-1	1.29E-4	5.30E-3	1.37E-5	-8.17E-2	1.58E-1
PM	disease inc.	7.44E-9	1.15E-9	1.34E-9	9.94E-9	2.47E-10	1.45E-9	1.63E-11	-3.78E-9	7.87E-9
IR	kBq U-235 eq	4.34E-3	8.58E-4	5.27E-2	5.79E-2	1.84E-4	8.41E-4	1.09E-5	-2.39E-3	5.65E-2
ETP-fw	CTUe	2.30E+0	1.59E-1	1.51E+0	3.97E+0	3.41E-2	3.18E-1	1.98E-3	-1.13E+0	3.19E+0
HTP-c	CTUh	5.61E-11	5.67E-12	3.27E-11	9.44E-11	1.21E-12	3.91E-11	5.91E-14	-2.62E-11	1.09E-10
HTP-nc	CTUh	1.56E-9	1.90E-10	1.03E-9	2.78E-9	4.07E-11	4.70E-10	1.28E-12	-7.68E-10	2.52E-9
SQP	Pt	6.34E-1	1.68E-1	1.23E+0	2.04E+0	3.60E-2	2.18E-1	6.07E-3	-1.61E+0	6.81E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.84E-1	2.82E-3	6.36E-1	8.23E-1	6.03E-4	1.34E-2	9.07E-5	-3.23E-1	5.14E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.84E-1	2.82E-3	6.36E-1	8.23E-1	6.03E-4	1.34E-2	9.07E-5	-3.23E-1	5.14E-1
PENRE	MJ	8.18E+0	2.08E-1	4.52E+0	1.29E+1	4.46E-2	2.93E-1	2.51E-3	-4.45E+0	8.79E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.18E+0	2.08E-1	4.52E+0	1.29E+1	4.46E-2	2.93E-1	2.51E-3	-4.45E+0	8.79E+0
PET	MJ	8.36E+0	2.11E-1	5.15E+0	1.37E+1	4.52E-2	3.07E-1	2.60E-3	-4.78E+0	9.30E+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	2.44E-3	2.22E-5	2.53E-3	4.99E-3	4.76E-6	1.58E-4	2.91E-6	-1.36E-3	3.80E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.14E-6	5.02E-7	8.94E-8	1.74E-6	1.07E-7	4.58E-7	2.87E-9	-1.08E-6	1.22E-6
NHWD	kg	1.05E-2	1.22E-2	2.55E-3	2.52E-2	2.60E-3	1.37E-2	1.04E-2	-3.76E-3	4.81E-2
RWD	kg	3.82E-6	1.33E-6	1.34E-7	5.29E-6	2.86E-7	1.07E-6	1.54E-8	-2.19E-6	4.47E-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