

Environmental Profile

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

Ecochain v3.5.80



Product: 3023710 - PP-R Elbow 90° Metal F/T GN 20x3/4"
 Unit: 1 piece
 Manufacturer: Wavin - CZ - Kostelec - Verified

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



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.

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

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.38	0	0	0.39	0	0	0	-0.03	0.36
ADPE	kg Sb-eq	1.26E-3	3.14E-7	4.77E-7	1.26E-3	5.79E-8	1.65E-7	5.08E-10	-5.89E-4	6.73E-4
ADPF	kg Sb-eq	2.60E-3	1.22E-4	4.80E-5	2.77E-3	1.63E-5	5.15E-5	7.23E-7	-1.01E-3	1.83E-3
GWP	kg CO2-eq	2.84E-1	1.80E-2	8.56E-3	3.10E-1	2.22E-3	3.02E-2	4.06E-4	-9.36E-2	2.50E-1
ODP	kg CFC-11-eq	1.45E-8	3.13E-9	1.10E-8	2.86E-8	4.12E-10	7.12E-10	1.75E-11	-5.57E-9	2.41E-8
POCP	kg ethene-eq	8.87E-4	1.69E-5	5.49E-6	9.09E-4	1.33E-6	5.31E-6	1.14E-7	-9.81E-5	8.18E-4
AP	kg SO2-eq	1.74E-2	2.61E-4	4.72E-5	1.77E-2	9.55E-6	3.15E-5	3.85E-7	-1.33E-3	1.64E-2
EP	kg PO4 3--eq	9.59E-4	3.23E-5	6.49E-6	9.97E-4	1.91E-6	5.16E-6	1.22E-7	-1.22E-4	8.83E-4
HTP	kg 1,4-DB-eq	2.83E+0	8.84E-3	9.83E-3	2.85E+0	9.49E-4	1.03E-2	4.12E-5	-1.89E-1	2.67E+0
FAETP	kg 1,4-DB-eq	6.56E-2	1.98E-4	3.47E-4	6.61E-2	2.78E-5	2.63E-4	3.24E-5	-7.98E-3	5.85E-2
MAETP	kg 1,4-DB-eq	2.87E+2	7.94E-1	8.67E-1	2.89E+2	9.93E-2	5.71E-1	3.31E-2	-2.74E+1	2.62E+2
TETP	kg 1,4-DB-eq	7.76E-3	2.84E-5	4.05E-4	8.20E-3	3.36E-6	3.18E-5	7.76E-8	-5.04E-4	7.73E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.92E-1	1.82E-2	9.96E-3	3.20E-1	2.24E-3	3.03E-2	4.72E-4	-9.69E-2	2.57E-1
GWP-f	kg CO2 eq	2.92E-1	1.82E-2	7.98E-3	3.18E-1	2.24E-3	3.03E-2	4.72E-4	-9.57E-2	2.55E-1
GWP-b	kg CO2 eq	3.27E-4	3.36E-6	1.89E-3	2.22E-3	1.36E-6	-4.97E-5	4.39E-7	-1.08E-3	1.09E-3
GWP-luluc	kg CO2 eq	3.62E-4	9.26E-6	9.52E-5	4.67E-4	7.92E-7	6.32E-6	1.50E-8	-1.11E-4	3.63E-4
ODP	kg CFC11 eq	1.57E-8	3.93E-9	6.23E-9	2.58E-8	5.16E-10	8.41E-10	2.18E-11	-5.70E-9	2.15E-8
AP	mol H+ eq	1.99E-2	3.29E-4	5.97E-5	2.03E-2	1.27E-5	4.03E-5	5.13E-7	-1.60E-3	1.88E-2
EP-fw	kg P eq	1.59E-4	1.15E-7	2.32E-7	1.59E-4	1.84E-8	2.14E-7	6.43E-10	-1.31E-5	1.47E-4
EP-m	kg N eq	1.04E-3	8.71E-5	1.21E-5	1.14E-3	4.56E-6	1.10E-5	2.57E-7	-1.87E-4	9.66E-4
EP-T	mol N eq	1.51E-2	9.67E-4	1.39E-4	1.63E-2	5.03E-5	1.23E-4	2.02E-6	-2.59E-3	1.38E-2
POCP	kg NMVOC eq	4.12E-3	2.56E-4	3.38E-5	4.41E-3	1.44E-5	3.77E-5	6.78E-7	-6.45E-4	3.81E-3
ADP-mm	kg Sb eq	1.26E-3	3.14E-7	4.77E-7	1.26E-3	5.79E-8	1.65E-7	5.08E-10	-5.89E-4	6.73E-4
ADP-f	MJ	5.11E+0	2.57E-1	1.55E+0	6.91E+0	3.43E-2	1.06E-1	1.54E-3	-2.10E+0	4.95E+0
WDP	m3 depriv.	2.38E-1	6.16E-4	3.02E-2	2.69E-1	1.05E-4	1.81E-3	3.70E-5	-7.27E-2	1.98E-1
PM	disease inc.	4.58E-8	1.14E-9	5.53E-10	4.75E-8	2.02E-10	6.37E-10	1.04E-11	-6.38E-9	4.20E-8
IR	kBq U-235 eq	1.17E-2	1.11E-3	1.79E-2	3.06E-2	1.50E-4	3.45E-4	6.75E-6	-4.84E-3	2.63E-2
ETP-fw	CTUe	1.96E+2	1.91E-1	5.38E-1	1.96E+2	2.79E-2	1.60E-1	1.15E-3	-2.78E+1	1.69E+2
HTP-c	CTUh	2.84E-9	9.09E-12	1.30E-11	2.87E-9	9.92E-13	1.47E-11	3.13E-14	-6.24E-10	2.26E-9
HTP-nc	CTUh	2.29E-7	2.00E-10	3.77E-10	2.29E-7	3.32E-11	2.20E-10	7.77E-13	-3.96E-8	1.90E-7
SQP	Pt	3.05E+0	1.42E-1	4.26E-1	3.62E+0	2.94E-2	1.00E-1	3.61E-3	-6.02E-1	3.15E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.69E-1	2.87E-3	2.16E-1	8.87E-1	4.93E-4	6.44E-3	3.72E-5	-1.84E-1	7.11E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.69E-1	2.87E-3	2.16E-1	8.87E-1	4.93E-4	6.44E-3	3.72E-5	-1.84E-1	7.11E-1
PENRE	MJ	5.46E+0	2.73E-1	1.55E+0	7.28E+0	3.65E-2	1.13E-1	1.64E-3	-2.25E+0	5.18E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.46E+0	2.73E-1	1.55E+0	7.28E+0	3.65E-2	1.13E-1	1.64E-3	-2.25E+0	5.18E+0
PET	MJ	6.13E+0	2.76E-1	1.77E+0	8.17E+0	3.70E-2	1.20E-1	1.67E-3	-2.44E+0	5.89E+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	5.73E-3	2.25E-5	9.39E-4	6.69E-3	3.89E-6	5.64E-5	1.78E-6	-1.69E-3	5.06E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.57E-4	4.80E-7	6.72E-8	1.58E-4	8.78E-8	1.91E-7	2.07E-9	-7.43E-5	8.40E-5
NHWD	kg	7.72E-2	9.51E-3	1.89E-3	8.86E-2	2.13E-3	5.07E-3	8.50E-3	-2.66E-2	7.77E-2
RWD	kg	9.82E-6	1.76E-6	1.01E-7	1.17E-5	2.34E-7	4.34E-7	1.01E-8	-3.92E-6	8.45E-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



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