

Environmental Profile

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

Ecochain v3.5.80



Product: 3044823 - PP-R Spigot Elbow GY 90 16 PN20
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

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0	0	0	0	0	0	0	-0	0
ADPE	kg Sb-eq	4.86E-7	3.00E-8	8.61E-8	6.02E-7	6.81E-9	3.22E-8	7.83E-11	-8.12E-8	5.60E-7
ADPF	kg Sb-eq	3.31E-4	8.47E-6	7.32E-6	3.47E-4	1.92E-6	1.25E-5	1.06E-7	-1.89E-4	1.73E-4
GWP	kg CO2-eq	2.00E-2	1.16E-3	1.31E-3	2.24E-2	2.61E-4	8.27E-3	1.06E-4	-1.20E-2	1.91E-2
ODP	kg CFC-11-eq	5.69E-10	2.14E-10	1.99E-9	2.78E-9	4.84E-11	1.64E-10	2.52E-12	-4.51E-10	2.54E-9
POCP	kg ethene-eq	1.62E-5	7.00E-7	9.01E-7	1.78E-5	1.57E-7	1.24E-6	2.42E-8	-7.93E-6	1.13E-5
AP	kg SO2-eq	6.87E-5	5.17E-6	8.23E-6	8.21E-5	1.12E-6	6.33E-6	5.64E-8	-2.88E-5	6.08E-5
EP	kg PO4 3--eq	6.61E-6	1.01E-6	1.09E-6	8.71E-6	2.24E-7	1.12E-6	2.35E-8	-2.63E-6	7.45E-6
HTP	kg 1,4-DB-eq	3.56E-3	4.95E-4	1.56E-3	5.61E-3	1.12E-4	2.56E-3	8.10E-6	-1.41E-3	6.87E-3
FAETP	kg 1,4-DB-eq	1.21E-4	1.44E-5	5.56E-5	1.91E-4	3.27E-6	5.75E-5	8.44E-6	-2.80E-5	2.32E-4
MAETP	kg 1,4-DB-eq	2.79E-1	5.17E-2	1.48E-1	4.78E-1	1.17E-2	1.30E-1	8.49E-3	-8.59E-2	5.43E-1
TETP	kg 1,4-DB-eq	1.46E-5	1.75E-6	7.37E-5	9.01E-5	3.96E-7	7.98E-6	1.41E-8	-5.63E-6	9.29E-5
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.09E-2	1.17E-3	1.54E-3	2.36E-2	2.63E-4	8.31E-3	1.24E-4	-1.25E-2	1.98E-2
GWP-f	kg CO2 eq	2.08E-2	1.16E-3	1.24E-3	2.33E-2	2.63E-4	8.31E-3	1.24E-4	-1.25E-2	1.95E-2
GWP-b	kg CO2 eq	6.72E-5	7.00E-7	2.85E-4	3.53E-4	1.60E-7	-2.29E-6	1.06E-7	-2.41E-5	3.26E-4
GWP-luluc	kg CO2 eq	7.09E-6	4.15E-7	1.74E-5	2.49E-5	9.32E-8	1.48E-6	2.36E-9	-2.51E-6	2.40E-5
ODP	kg CFC11 eq	5.60E-10	2.68E-10	1.12E-9	1.95E-9	6.07E-11	1.94E-10	3.13E-12	-4.77E-10	1.73E-9
AP	mol H+ eq	8.27E-5	6.88E-6	1.04E-5	9.99E-5	1.50E-6	8.17E-6	7.57E-8	-3.46E-5	7.51E-5
EP-fw	kg P eq	3.55E-7	9.54E-9	3.88E-8	4.03E-7	2.17E-9	4.28E-8	1.05E-10	-1.37E-7	3.11E-7
EP-m	kg N eq	1.31E-5	2.43E-6	2.00E-6	1.76E-5	5.37E-7	2.39E-6	4.67E-8	-6.14E-6	1.44E-5
EP-T	mol N eq	1.53E-4	2.68E-5	2.40E-5	2.04E-4	5.91E-6	2.63E-5	3.05E-7	-6.80E-5	1.68E-4
POCP	kg NMVOC eq	6.48E-5	7.63E-6	5.68E-6	7.82E-5	1.69E-6	8.29E-6	1.14E-7	-3.13E-5	5.69E-5
ADP-mm	kg Sb eq	4.86E-7	3.00E-8	8.61E-8	6.02E-7	6.81E-9	3.22E-8	7.83E-11	-8.12E-8	5.60E-7
ADP-f	MJ	6.91E-1	1.79E-2	2.81E-1	9.91E-1	4.04E-3	2.58E-2	2.29E-4	-3.90E-1	6.31E-1
WDP	m3 depriv.	1.50E-2	5.46E-5	5.13E-3	2.01E-2	1.24E-5	5.03E-4	2.01E-6	-6.73E-3	1.39E-2
PM	disease inc.	7.07E-10	1.05E-10	9.01E-11	9.01E-10	2.38E-11	1.34E-10	1.58E-12	-2.90E-10	7.71E-10
IR	kBq U-235 eq	4.08E-4	7.80E-5	3.28E-3	3.76E-3	1.77E-5	7.78E-5	1.05E-6	-1.82E-4	3.68E-3
ETP-fw	CTUe	1.61E-1	1.45E-2	9.57E-2	2.71E-1	3.28E-3	2.92E-2	1.92E-4	-4.94E-2	2.55E-1
HTP-c	CTUh	5.96E-12	5.17E-13	2.16E-12	8.64E-12	1.17E-13	4.06E-12	6.23E-15	-2.06E-12	1.08E-11
HTP-nc	CTUh	1.63E-10	1.72E-11	6.60E-11	2.47E-10	3.91E-12	4.51E-11	1.27E-13	-5.83E-11	2.38E-10
SQP	Pt	3.42E-2	1.52E-2	7.73E-2	1.27E-1	3.46E-3	2.06E-2	5.84E-4	-1.38E-2	1.37E-1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.17E-2	2.55E-4	3.96E-2	5.16E-2	5.80E-5	1.27E-3	8.39E-6	-5.42E-3	4.75E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.17E-2	2.55E-4	3.96E-2	5.16E-2	5.80E-5	1.27E-3	8.39E-6	-5.42E-3	4.75E-2
PENRE	MJ	7.42E-1	1.90E-2	2.82E-1	1.04E+0	4.29E-3	2.75E-2	2.43E-4	-4.20E-1	6.55E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.42E-1	1.90E-2	2.82E-1	1.04E+0	4.29E-3	2.75E-2	2.43E-4	-4.20E-1	6.55E-1
PET	MJ	7.54E-1	1.92E-2	3.22E-1	1.09E+0	4.35E-3	2.88E-2	2.52E-4	-4.26E-1	7.03E-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	2.44E-4	2.01E-6	1.63E-4	4.09E-4	4.57E-7	1.49E-5	2.78E-7	-1.01E-4	3.23E-4
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.20E-7	4.55E-8	8.06E-9	1.73E-7	1.03E-8	4.26E-8	2.84E-10	-9.36E-8	1.33E-7
NHWD	kg	1.06E-3	1.10E-3	2.28E-4	2.39E-3	2.50E-4	1.30E-3	1.00E-3	-3.00E-4	4.64E-3
RWD	kg	3.57E-7	1.21E-7	1.21E-8	4.91E-7	2.75E-8	9.87E-8	1.48E-9	-1.64E-7	4.55E-7
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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