

Environmental Profile

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

Ecochain v3.5.80



Product: 3044897 - PP-R Reduc.Sl.Metal F/T Cross GY 20x1/2
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	0.29	0	0	0.29	0	0	0	-0.02	0.27
ADPE	kg Sb-eq	9.52E-4	2.37E-7	3.03E-7	9.53E-4	4.22E-8	1.17E-7	3.68E-10	-4.45E-4	5.08E-4
ADPF	kg Sb-eq	1.88E-3	9.19E-5	3.25E-5	2.01E-3	1.19E-5	3.61E-5	5.24E-7	-7.21E-4	1.33E-3
GWP	kg CO2-eq	2.10E-1	1.36E-2	5.79E-3	2.29E-1	1.62E-3	2.10E-2	2.84E-4	-6.80E-2	1.84E-1
ODP	kg CFC-11-eq	1.09E-8	2.36E-9	6.94E-9	2.02E-8	3.00E-10	5.02E-10	1.26E-11	-4.10E-9	1.69E-8
POCP	kg ethene-eq	6.66E-4	1.28E-5	3.63E-6	6.82E-4	9.71E-7	3.74E-6	8.07E-8	-7.23E-5	6.15E-4
AP	kg SO2-eq	1.31E-2	1.97E-4	3.05E-5	1.34E-2	6.97E-6	2.24E-5	2.79E-7	-9.97E-4	1.24E-2
EP	kg PO4 3--eq	7.23E-4	2.44E-5	4.25E-6	7.52E-4	1.39E-6	3.65E-6	8.69E-8	-9.12E-5	6.65E-4
HTP	kg 1,4-DB-eq	2.13E+0	6.66E-3	6.58E-3	2.15E+0	6.92E-4	7.22E-3	2.93E-5	-1.42E-1	2.01E+0
FAETP	kg 1,4-DB-eq	4.95E-2	1.49E-4	2.31E-4	4.99E-2	2.03E-5	1.86E-4	2.23E-5	-6.02E-3	4.41E-2
MAETP	kg 1,4-DB-eq	2.17E+2	5.98E-1	5.64E-1	2.18E+2	7.25E-2	4.03E-1	2.28E-2	-2.07E+1	1.98E+2
TETP	kg 1,4-DB-eq	5.86E-3	2.14E-5	2.56E-4	6.14E-3	2.45E-6	2.23E-5	5.59E-8	-3.79E-4	5.78E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.16E-1	1.37E-2	6.72E-3	2.37E-1	1.63E-3	2.11E-2	3.29E-4	-7.04E-2	1.89E-1
GWP-f	kg CO2 eq	2.16E-1	1.37E-2	5.37E-3	2.35E-1	1.63E-3	2.11E-2	3.29E-4	-6.95E-2	1.88E-1
GWP-b	kg CO2 eq	2.27E-4	2.52E-6	1.29E-3	1.52E-3	9.91E-7	-4.30E-5	3.07E-7	-8.27E-4	6.48E-4
GWP-luluc	kg CO2 eq	2.73E-4	6.98E-6	6.01E-5	3.40E-4	5.78E-7	4.45E-6	1.09E-8	-8.33E-5	2.62E-4
ODP	kg CFC11 eq	1.18E-8	2.96E-9	3.96E-9	1.87E-8	3.76E-10	5.93E-10	1.58E-11	-4.20E-9	1.55E-8
AP	mol H+ eq	1.50E-2	2.49E-4	3.84E-5	1.53E-2	9.30E-6	2.86E-5	3.72E-7	-1.20E-3	1.42E-2
EP-fw	kg P eq	1.20E-4	8.63E-8	1.52E-7	1.20E-4	1.34E-8	1.52E-7	4.67E-10	-9.83E-6	1.11E-4
EP-m	kg N eq	7.81E-4	6.57E-5	7.94E-6	8.55E-4	3.33E-6	7.81E-6	1.83E-7	-1.40E-4	7.27E-4
EP-T	mol N eq	1.14E-2	7.30E-4	8.97E-5	1.22E-2	3.67E-5	8.70E-5	1.46E-6	-1.94E-3	1.04E-2
POCP	kg NMVOC eq	3.09E-3	1.93E-4	2.22E-5	3.31E-3	1.05E-5	2.66E-5	4.87E-7	-4.80E-4	2.87E-3
ADP-mm	kg Sb eq	9.52E-4	2.37E-7	3.03E-7	9.53E-4	4.22E-8	1.17E-7	3.68E-10	-4.45E-4	5.08E-4
ADP-f	MJ	3.68E+0	1.94E-1	9.77E-1	4.85E+0	2.51E-2	7.46E-2	1.11E-3	-1.50E+0	3.45E+0
WDP	m3 depriv.	1.76E-1	4.63E-4	1.97E-2	1.97E-1	7.69E-5	1.26E-3	2.80E-5	-5.34E-2	1.45E-1
PM	disease inc.	3.44E-8	8.56E-10	3.67E-10	3.57E-8	1.47E-10	4.51E-10	7.51E-12	-4.75E-9	3.15E-8
IR	kBq U-235 eq	8.72E-3	8.40E-4	1.12E-2	2.08E-2	1.09E-4	2.43E-4	4.86E-6	-3.61E-3	1.75E-2
ETP-fw	CTUe	1.48E+2	1.44E-1	3.44E-1	1.48E+2	2.03E-2	1.15E-1	8.30E-4	-2.09E+1	1.27E+2
HTP-c	CTUh	2.15E-9	6.85E-12	8.53E-12	2.16E-9	7.24E-13	1.05E-11	2.26E-14	-4.71E-10	1.70E-9
HTP-nc	CTUh	1.73E-7	1.51E-10	2.43E-10	1.73E-7	2.43E-11	1.57E-10	5.61E-13	-2.99E-8	1.43E-7
SQP	Pt	2.30E+0	1.07E-1	2.70E-1	2.67E+0	2.14E-2	7.12E-2	2.60E-3	-4.49E-1	2.32E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.03E-1	2.16E-3	1.36E-1	6.41E-1	3.59E-4	4.59E-3	2.61E-5	-1.37E-1	5.09E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.03E-1	2.16E-3	1.36E-1	6.41E-1	3.59E-4	4.59E-3	2.61E-5	-1.37E-1	5.09E-1
PENRE	MJ	3.94E+0	2.06E-1	9.82E-1	5.12E+0	2.66E-2	7.95E-2	1.18E-3	-1.61E+0	3.62E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.94E+0	2.06E-1	9.82E-1	5.12E+0	2.66E-2	7.95E-2	1.18E-3	-1.61E+0	3.62E+0
PET	MJ	4.44E+0	2.08E-1	1.12E+0	5.77E+0	2.70E-2	8.41E-2	1.21E-3	-1.75E+0	4.13E+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	4.28E-3	1.69E-5	6.06E-4	4.90E-3	2.83E-6	3.93E-5	1.28E-6	-1.26E-3	3.69E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.19E-4	3.61E-7	4.90E-8	1.19E-4	6.41E-8	1.35E-7	1.51E-9	-5.61E-5	6.34E-5
NHWD	kg	5.82E-2	7.15E-3	1.38E-3	6.67E-2	1.55E-3	3.55E-3	6.20E-3	-2.00E-2	5.80E-2
RWD	kg	7.35E-6	1.33E-6	7.34E-8	8.76E-6	1.70E-7	3.06E-7	7.29E-9	-2.92E-6	6.32E-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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