Environmental Profile

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

Ecochain v3.5.80

Product:	3043891 - Wafix PP WC Connector 110 Short
Unit:	1 piece
Manufacturer:	Wavin - PL -Buk - Extra products

Wafix PP is a versatile, uncomplicated solution for your indoor drainage. You can easily install the impact-resistant pipes even in frost. Their excellent chemical resistance makes them ideal for cast-in applications.

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	08-06-2023
End of validity:	08-06-2028
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 - PL -Buk - Extra products (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

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	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.24E-1	5.45E-3	1.45E-4	9.29E-1	7.86E-3	9.59E-1	4.76E-3	-5.01E-1	1.40E+0
GWP-f	kg CO2 eq	1.13E+0	5.44E-3	1.46E-4	1.13E+0	7.85E-3	7.45E-1	4.76E-3	-5.30E-1	1.36E+0
GWP-b	kg CO2 eq	-2.06E-1	3.31E-6	-1.54E-6	-2.06E-1	4.77E-6	2.14E-1	4.46E-6	2.99E-2	3.78E-2
GWP-luluc	kg CO2 eq	9.95E-4	1.93E-6	1.49E-7	9.97E-4	2.78E-6	3.49E-5	8.70E-8	-3.98E-4	6.36E-4
ODP	kg CFC11 eq	1.60E-7	1.25E-9	8.26E-12	1.62E-7	1.81E-9	6.02E-9	1.25E-10	-4.47E-8	1.25E-7
AP	mol H+ eq	5.56E-3	3.10E-5	1.47E-6	5.59E-3	4.47E-5	2.81E-4	3.03E-6	-1.27E-3	4.65E-3
EP-fw	kg P eq	3.25E-5	4.48E-8	8.24E-9	3.25E-5	6.46E-8	1.07E-6	3.99E-9	-7.93E-6	2.57E-5
EP-m	kg N eq	9.39E-4	1.11E-5	1.55E-7	9.50E-4	1.60E-5	9.14E-5	3.98E-6	-2.73E-4	7.89E-4
EP-T	mol N eq	1.06E-2	1.22E-4	1.85E-6	1.07E-2	1.76E-4	1.01E-3	1.22E-5	-3.08E-3	8.79E-3
POCP	kg NMVOC eq	4.53E-3	3.50E-5	6.28E-7	4.57E-3	5.04E-5	2.91E-4	4.50E-6	-1.20E-3	3.72E-3
ADP-mm	kg Sb eq	2.31E-4	1.41E-7	1.97E-8	2.31E-4	2.03E-7	8.62E-7	3.01E-9	-9.66E-6	2.23E-4
ADP-f	MJ	3.27E+1	8.36E-2	1.36E-3	3.28E+1	1.20E-1	6.66E-1	9.14E-3	-1.26E+1	2.11E+1
WDP	m3 depriv.	6.97E-1	2.57E-4	5.22E-5	6.97E-1	3.70E-4	1.74E-2	4.48E-5	-2.08E-1	5.07E-1
PM	disease inc.	6.33E-8	4.92E-10	9.08E-12	6.38E-8	7.09E-10	3.59E-9	6.25E-11	-1.41E-8	5.40E-8
IR	kBq U-235 eq	6.27E-2	3.65E-4	1.02E-6	6.31E-2	5.27E-4	2.07E-3	4.33E-5	-9.83E-3	5.59E-2
ETP-fw	CTUe	2.24E+1	6.79E-2	1.21E-2	2.25E+1	9.78E-2	1.61E+0	1.37E-2	-5.07E+0	1.92E+1
HTP-c	CTUh	6.54E-10	2.42E-12	6.17E-13	6.57E-10	3.48E-12	8.96E-11	2.34E-13	-1.56E-10	5.94E-10
HTP-nc	CTUh	1.43E-8	8.09E-11	1.57E-11	1.44E-8	1.17E-10	1.39E-9	6.42E-12	-2.32E-9	1.36E-8
SQP	Pt	2.23E+1	7.15E-2	2.24E-3	2.24E+1	1.03E-1	4.93E-1	2.33E-2	-2.04E+1	2.63E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.00E+0	1.20E-3	2.40E-2	7.03E+0	1.73E-3	3.19E-2	3.89E-4	-3.31E+0	3.75E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.00E+0	1.20E-3	2.40E-2	7.03E+0	1.73E-3	3.19E-2	3.89E-4	-3.31E+0	3.75E+0
PENRE	MJ	3.50E+1	8.87E-2	1.44E-3	3.51E+1	1.28E-1	7.11E-1	9.69E-3	-1.36E+1	2.23E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.50E+1	8.87E-2	1.44E-3	3.51E+1	1.28E-1	7.11E-1	9.69E-3	-1.36E+1	2.23E+1
PET	MJ	4.20E+1	8.99E-2	2.55E-2	4.21E+1	1.30E-1	7.43E-1	1.01E-2	-1.69E+1	2.61E+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	1.53E-2	9.46E-6	1.46E-6	1.53E-2	1.36E-5	1.05E-3	1.13E-5	-4.01E-3	1.24E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.44E-5	2.14E-7	2.73E-13	1.46E-5	3.08E-7	1.48E-6	1.10E-8	-8.57E-6	7.86E-6
NHWD	kg	9.30E-2	5.18E-3	1.05E-6	9.82E-2	7.47E-3	4.32E-2	4.00E-2	-1.96E-2	1.69E-1
RWD	kg	7.94E-5	5.68E-7	1.10E-13	8.00E-5	8.19E-7	2.65E-6	6.00E-8	-1.06E-5	7.29E-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

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