Environmental Profile

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

Ecochain v3.5.80

Product:	3020723 - Wafix PP Socket BK 90 S/S
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	2.97E-1	4.30E-3	1.45E-4	3.02E-1	4.35E-3	3.00E-1	2.05E-3	-2.25E-1	3.83E-1
GWP-f	kg CO2 eq	4.44E-1	4.29E-3	1.46E-4	4.48E-1	4.34E-3	1.42E-1	2.05E-3	-2.42E-1	3.56E-1
GWP-b	kg CO2 eq	-1.47E-1	2.61E-6	-1.54E-6	-1.47E-1	2.64E-6	1.58E-1	1.78E-6	1.72E-2	2.78E-2
GWP-luluc	kg CO2 eq	4.36E-4	1.52E-6	1.49E-7	4.37E-4	1.54E-6	2.55E-5	3.49E-8	-2.52E-4	2.13E-4
ODP	kg CFC11 eq	3.03E-8	9.90E-10	8.26E-12	3.13E-8	1.00E-9	3.71E-9	5.14E-11	-1.32E-8	2.28E-8
AP	mol H+ eq	1.90E-3	2.45E-5	1.47E-6	1.92E-3	2.47E-5	1.53E-4	1.22E-6	-8.09E-4	1.30E-3
EP-fw	kg P eq	1.10E-5	3.53E-8	8.24E-9	1.10E-5	3.57E-8	7.47E-7	1.60E-9	-5.05E-6	6.75E-6
EP-m	kg N eq	3.53E-4	8.75E-6	1.55E-7	3.62E-4	8.85E-6	4.63E-5	7.97E-7	-1.62E-4	2.56E-4
EP-T	mol N eq	3.89E-3	9.64E-5	1.85E-6	3.98E-3	9.76E-5	5.10E-4	4.97E-6	-1.83E-3	2.77E-3
POCP	kg NMVOC eq	1.59E-3	2.76E-5	6.28E-7	1.62E-3	2.79E-5	1.59E-4	1.87E-6	-7.44E-4	1.06E-3
ADP-mm	kg Sb eq	2.58E-5	1.11E-7	1.97E-8	2.59E-5	1.12E-7	6.01E-7	1.24E-9	-1.85E-6	2.48E-5
ADP-f	MJ	1.37E+1	6.59E-2	1.36E-3	1.37E+1	6.67E-2	4.60E-1	3.75E-3	-7.01E+0	7.27E+0
WDP	m3 depriv.	2.75E-1	2.02E-4	5.22E-5	2.75E-1	2.05E-4	8.59E-3	1.91E-5	-1.48E-1	1.37E-1
PM	disease inc.	2.06E-8	3.88E-10	9.08E-12	2.10E-8	3.92E-10	2.48E-9	2.58E-11	-9.45E-9	1.45E-8
IR	kBq U-235 eq	1.46E-2	2.88E-4	1.02E-6	1.49E-2	2.91E-4	1.44E-3	1.74E-5	-5.26E-3	1.14E-2
ETP-fw	CTUe	8.37E+0	5.35E-2	1.21E-2	8.43E+0	5.41E-2	5.38E-1	3.14E-3	-3.01E+0	6.02E+0
HTP-c	CTUh	2.65E-10	1.90E-12	6.17E-13	2.67E-10	1.93E-12	6.49E-11	9.17E-14	-9.99E-11	2.34E-10
HTP-nc	CTUh	5.32E-9	6.38E-11	1.57E-11	5.40E-9	6.45E-11	7.83E-10	2.02E-12	-1.50E-9	4.75E-9
SQP	Pt	1.46E+1	5.64E-2	2.24E-3	1.46E+1	5.70E-2	3.63E-1	9.62E-3	-1.42E+1	8.66E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.17E+0	9.46E-4	2.40E-2	4.19E+0	9.56E-4	2.21E-2	1.45E-4	-2.30E+0	1.92E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.17E+0	9.46E-4	2.40E-2	4.19E+0	9.56E-4	2.21E-2	1.45E-4	-2.30E+0	1.92E+0
PENRE	MJ	1.47E+1	7.00E-2	1.44E-3	1.47E+1	7.08E-2	4.90E-1	3.98E-3	-7.56E+0	7.75E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.47E+1	7.00E-2	1.44E-3	1.47E+1	7.08E-2	4.90E-1	3.98E-3	-7.56E+0	7.75E+0
PET	MJ	1.88E+1	7.09E-2	2.55E-2	1.89E+1	7.17E-2	5.12E-1	4.12E-3	-9.85E+0	9.67E+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	5.07E-3	7.46E-6	1.46E-6	5.08E-3	7.54E-6	2.61E-4	4.62E-6	-2.61E-3	2.74E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.41E-6	1.69E-7	2.73E-13	4.58E-6	1.70E-7	7.84E-7	4.52E-9	-2.93E-6	2.61E-6
NHWD	kg	3.48E-2	4.09E-3	1.05E-6	3.88E-2	4.13E-3	2.31E-2	1.65E-2	-1.28E-2	6.98E-2
RWD	kg	1.61E-5	4.48E-7	1.10E-13	1.66E-5	4.53E-7	1.85E-6	2.45E-8	-5.10E-6	1.38E-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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