Environmental Profile

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

Ecochain v3.5.80

Product:	3020668 - Wafix PP Socket BK 32 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	7.00E-2	6.68E-4	1.45E-4	7.08E-2	7.32E-4	8.21E-2	3.45E-4	-4.42E-2	1.10E-1
GWP-f	kg CO2 eq	1.19E-1	6.67E-4	1.46E-4	1.20E-1	7.32E-4	3.04E-2	3.45E-4	-4.89E-2	1.03E-1
GWP-b	kg CO2 eq	-4.94E-2	4.05E-7	-1.54E-6	-4.94E-2	4.44E-7	5.17E-2	2.99E-7	4.78E-3	7.11E-3
GWP-luluc	kg CO2 eq	1.22E-4	2.36E-7	1.49E-7	1.22E-4	2.59E-7	4.48E-6	6.06E-9	-6.82E-5	5.90E-5
ODP	kg CFC11 eq	1.25E-8	1.54E-10	8.26E-12	1.26E-8	1.69E-10	6.99E-10	8.66E-12	-3.50E-9	1.00E-8
AP	mol H+ eq	5.71E-4	3.80E-6	1.47E-6	5.76E-4	4.17E-6	2.90E-5	2.07E-7	-1.72E-4	4.38E-4
EP-fw	kg P eq	3.36E-6	5.49E-9	8.24E-9	3.37E-6	6.02E-9	1.32E-7	2.75E-10	-1.21E-6	2.30E-6
EP-m	kg N eq	1.01E-4	1.36E-6	1.55E-7	1.03E-4	1.49E-6	9.02E-6	1.33E-7	-3.65E-5	7.70E-5
EP-T	mol N eq	1.15E-3	1.50E-5	1.85E-6	1.17E-3	1.64E-5	9.94E-5	8.40E-7	-4.16E-4	8.69E-4
POCP	kg NMVOC eq	4.55E-4	4.29E-6	6.28E-7	4.60E-4	4.70E-6	3.06E-5	3.15E-7	-1.61E-4	3.35E-4
ADP-mm	kg Sb eq	1.25E-5	1.73E-8	1.97E-8	1.26E-5	1.89E-8	1.11E-7	2.11E-10	-3.92E-7	1.23E-5
ADP-f	MJ	3.43E+0	1.02E-2	1.36E-3	3.44E+0	1.12E-2	8.29E-2	6.33E-4	-1.32E+0	2.22E+0
WDP	m3 depriv.	7.54E-2	3.14E-5	5.22E-5	7.55E-2	3.45E-5	1.49E-3	3.86E-6	-2.96E-2	4.74E-2
PM	disease inc.	6.41E-9	6.02E-11	9.08E-12	6.48E-9	6.61E-11	4.58E-10	4.35E-12	-2.24E-9	4.76E-9
IR	kBq U-235 eq	5.34E-3	4.48E-5	1.02E-6	5.39E-3	4.91E-5	2.66E-4	2.92E-6	-1.21E-3	4.50E-3
ETP-fw	CTUe	2.33E+0	8.32E-3	1.21E-2	2.35E+0	9.12E-3	9.90E-2	5.30E-4	-7.73E-1	1.68E+0
HTP-c	CTUh	7.66E-11	2.96E-13	6.17E-13	7.75E-11	3.25E-13	1.28E-11	1.60E-14	-2.72E-11	6.34E-11
HTP-nc	CTUh	1.46E-9	9.92E-12	1.57E-11	1.49E-9	1.09E-11	1.46E-10	3.44E-13	-3.39E-10	1.31E-9
SQP	Pt	4.71E+0	8.76E-3	2.24E-3	4.72E+0	9.61E-3	6.51E-2	1.62E-3	-4.45E+0	3.42E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.77E-1	1.47E-4	2.40E-2	9.01E-1	1.61E-4	3.90E-3	2.41E-5	-7.08E-1	1.98E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.77E-1	1.47E-4	2.40E-2	9.01E-1	1.61E-4	3.90E-3	2.41E-5	-7.08E-1	1.98E-1
PENRE	MJ	3.67E+0	1.09E-2	1.44E-3	3.68E+0	1.19E-2	8.82E-2	6.72E-4	-1.42E+0	2.36E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.67E+0	1.09E-2	1.44E-3	3.68E+0	1.19E-2	8.82E-2	6.72E-4	-1.42E+0	2.36E+0
PET	MJ	4.55E+0	1.10E-2	2.55E-2	4.58E+0	1.21E-2	9.21E-2	6.96E-4	-2.13E+0	2.56E+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	1.58E-3	1.16E-6	1.46E-6	1.58E-3	1.27E-6	4.71E-5	7.77E-7	-5.54E-4	1.08E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.57E-6	2.62E-8	2.73E-13	1.60E-6	2.87E-8	1.46E-7	7.69E-10	-7.59E-7	1.01E-6
NHWD	kg	1.21E-2	6.35E-4	1.05E-6	1.27E-2	6.96E-4	4.42E-3	2.78E-3	-3.35E-3	1.72E-2
RWD	kg	6.29E-6	6.97E-8	1.10E-13	6.36E-6	7.64E-8	3.45E-7	4.12E-9	-1.21E-6	5.58E-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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