Environmental Profile

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

Ecochain v3.5.80

Product:	3043892 - Wafix PP Adaptor 88° GY 110
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	4.47E-1	6.28E-3	1.45E-4	4.54E-1	5.94E-3	3.66E-1	2.84E-3	-3.02E-1	5.25E-1
GWP-f	kg CO2 eq	5.94E-1	6.27E-3	1.46E-4	6.00E-1	5.93E-3	2.08E-1	2.84E-3	-3.19E-1	4.98E-1
GWP-b	kg CO2 eq	-1.47E-1	3.81E-6	-1.54E-6	-1.47E-1	3.60E-6	1.58E-1	2.49E-6	1.70E-2	2.75E-2
GWP-luluc	kg CO2 eq	4.52E-4	2.22E-6	1.49E-7	4.54E-4	2.10E-6	3.40E-5	4.84E-8	-2.66E-4	2.25E-4
ODP	kg CFC11 eq	4.13E-8	1.45E-9	8.26E-12	4.27E-8	1.37E-9	4.84E-9	7.14E-11	-1.69E-8	3.21E-8
AP	mol H+ eq	2.52E-3	3.57E-5	1.47E-6	2.56E-3	3.38E-5	2.02E-4	1.70E-6	-1.01E-3	1.79E-3
EP-fw	kg P eq	1.38E-5	5.16E-8	8.24E-9	1.38E-5	4.88E-8	9.93E-7	2.22E-9	-5.84E-6	9.05E-6
EP-m	kg N eq	4.46E-4	1.28E-5	1.55E-7	4.59E-4	1.21E-5	6.09E-5	1.19E-6	-1.98E-4	3.35E-4
EP-T	mol N eq	4.99E-3	1.41E-4	1.85E-6	5.13E-3	1.33E-4	6.70E-4	6.92E-6	-2.23E-3	3.71E-3
POCP	kg NMVOC eq	2.11E-3	4.03E-5	6.28E-7	2.15E-3	3.81E-5	2.09E-4	2.59E-6	-9.28E-4	1.48E-3
ADP-mm	kg Sb eq	4.55E-5	1.62E-7	1.97E-8	4.56E-5	1.53E-7	7.85E-7	1.72E-9	-2.60E-6	4.40E-5
ADP-f	MJ	1.87E+1	9.63E-2	1.36E-3	1.88E+1	9.10E-2	6.08E-1	5.21E-3	-9.34E+0	1.01E+1
WDP	m3 depriv.	3.81E-1	2.96E-4	5.22E-5	3.81E-1	2.79E-4	1.17E-2	2.58E-5	-1.86E-1	2.07E-1
PM	disease inc.	2.63E-8	5.66E-10	9.08E-12	2.69E-8	5.35E-10	3.24E-9	3.58E-11	-1.11E-8	1.96E-8
IR	kBq U-235 eq	2.01E-2	4.21E-4	1.02E-6	2.05E-2	3.98E-4	1.89E-3	2.42E-5	-6.37E-3	1.65E-2
ETP-fw	CTUe	8.88E+0	7.82E-2	1.21E-2	8.97E+0	7.39E-2	7.38E-1	4.61E-3	-3.30E+0	6.49E+0
HTP-c	CTUh	3.17E-10	2.78E-12	6.17E-13	3.21E-10	2.63E-12	8.45E-11	1.27E-13	-1.12E-10	2.96E-10
HTP-nc	CTUh	6.66E-9	9.32E-11	1.57E-11	6.77E-9	8.81E-11	1.04E-9	2.87E-12	-1.84E-9	6.06E-9
SQP	Pt	1.46E+1	8.24E-2	2.24E-3	1.47E+1	7.79E-2	4.80E-1	1.34E-2	-1.43E+1	1.05E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.38E+0	1.38E-3	2.40E-2	4.40E+0	1.31E-3	2.94E-2	2.04E-4	-2.32E+0	2.11E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.38E+0	1.38E-3	2.40E-2	4.40E+0	1.31E-3	2.94E-2	2.04E-4	-2.32E+0	2.11E+0
PENRE	MJ	2.00E+1	1.02E-1	1.44E-3	2.01E+1	9.67E-2	6.48E-1	5.53E-3	-1.01E+1	1.08E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.00E+1	1.02E-1	1.44E-3	2.01E+1	9.67E-2	6.48E-1	5.53E-3	-1.01E+1	1.08E+1
PET	MJ	2.44E+1	1.04E-1	2.55E-2	2.45E+1	9.80E-2	6.77E-1	5.73E-3	-1.24E+1	1.29E+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	6.97E-3	1.09E-5	1.46E-6	6.98E-3	1.03E-5	3.74E-4	6.43E-6	-3.19E-3	4.18E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.64E-6	2.46E-7	2.73E-13	5.89E-6	2.33E-7	1.04E-6	6.28E-9	-3.61E-6	3.55E-6
NHWD	kg	4.40E-2	5.97E-3	1.05E-6	5.00E-2	5.64E-3	3.07E-2	2.30E-2	-1.46E-2	9.48E-2
RWD	kg	2.24E-5	6.55E-7	1.10E-13	2.31E-5	6.19E-7	2.42E-6	3.41E-8	-6.16E-6	2.00E-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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