Environmental Profile

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

Ecochain v3.5.80

Product:	3020691 - Wafix PP Reducer BK 125x110
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	2.57E-1	8.75E-4	1.45E-4	2.58E-1	3.66E-3	3.31E-1	1.84E-3	-2.03E-1	3.92E-1
GWP-f	kg CO2 eq	4.05E-1	8.74E-4	1.46E-4	4.06E-1	3.66E-3	1.73E-1	1.84E-3	-2.20E-1	3.65E-1
GWP-b	kg CO2 eq	-1.48E-1	5.31E-7	-1.54E-6	-1.48E-1	2.22E-6	1.58E-1	1.63E-6	1.74E-2	2.71E-2
GWP-luluc	kg CO2 eq	3.84E-4	3.09E-7	1.49E-7	3.84E-4	1.30E-6	2.06E-5	3.23E-8	-2.45E-4	1.61E-4
ODP	kg CFC11 eq	2.99E-8	2.01E-10	8.26E-12	3.01E-8	8.44E-10	3.15E-9	4.67E-11	-1.48E-8	1.93E-8
AP	mol H+ eq	1.76E-3	4.98E-6	1.47E-6	1.76E-3	2.09E-5	1.33E-4	1.12E-6	-7.09E-4	1.21E-3
EP-fw	kg P eq	9.97E-6	7.19E-9	8.24E-9	9.99E-6	3.01E-8	6.08E-7	1.47E-9	-4.67E-6	5.96E-6
EP-m	kg N eq	3.20E-4	1.78E-6	1.55E-7	3.22E-4	7.46E-6	4.12E-5	9.36E-7	-1.46E-4	2.26E-4
EP-T	mol N eq	3.54E-3	1.96E-5	1.85E-6	3.56E-3	8.22E-5	4.54E-4	4.53E-6	-1.66E-3	2.44E-3
POCP	kg NMVOC eq	1.47E-3	5.61E-6	6.28E-7	1.48E-3	2.35E-5	1.39E-4	1.69E-6	-6.56E-4	9.85E-4
ADP-mm	kg Sb eq	2.90E-5	2.26E-8	1.97E-8	2.90E-5	9.47E-8	4.96E-7	1.13E-9	-2.33E-6	2.73E-5
ADP-f	MJ	1.24E+1	1.34E-2	1.36E-3	1.24E+1	5.62E-2	3.77E-1	3.41E-3	-6.00E+0	6.80E+0
WDP	m3 depriv.	2.49E-1	4.12E-5	5.22E-5	2.49E-1	1.72E-4	7.48E-3	1.84E-5	-1.26E-1	1.31E-1
PM	disease inc.	1.94E-8	7.89E-11	9.08E-12	1.94E-8	3.30E-10	2.04E-9	2.34E-11	-8.55E-9	1.33E-8
IR	kBq U-235 eq	1.35E-2	5.86E-5	1.02E-6	1.36E-2	2.46E-4	1.19E-3	1.59E-5	-4.92E-3	1.01E-2
ETP-fw	CTUe	7.23E+0	1.09E-2	1.21E-2	7.26E+0	4.56E-2	5.31E-1	3.50E-3	-2.91E+0	4.93E+0
HTP-c	CTUh	2.51E-10	3.88E-13	6.17E-13	2.52E-10	1.62E-12	5.37E-11	8.54E-14	-9.52E-11	2.12E-10
HTP-nc	CTUh	4.93E-9	1.30E-11	1.57E-11	4.96E-9	5.44E-11	6.71E-10	2.00E-12	-1.34E-9	4.35E-9
SQP	Pt	1.41E+1	1.15E-2	2.24E-3	1.42E+1	4.81E-2	2.94E-1	8.73E-3	-1.42E+1	3.34E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.93E+0	1.92E-4	2.40E-2	3.95E+0	8.06E-4	1.80E-2	1.35E-4	-2.28E+0	1.69E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.93E+0	1.92E-4	2.40E-2	3.95E+0	8.06E-4	1.80E-2	1.35E-4	-2.28E+0	1.69E+0
PENRE	MJ	1.32E+1	1.42E-2	1.44E-3	1.33E+1	5.97E-2	4.02E-1	3.62E-3	-6.48E+0	7.25E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.32E+1	1.42E-2	1.44E-3	1.33E+1	5.97E-2	4.02E-1	3.62E-3	-6.48E+0	7.25E+0
PET	MJ	1.72E+1	1.44E-2	2.55E-2	1.72E+1	6.05E-2	4.20E-1	3.75E-3	-8.76E+0	8.94E+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	4.62E-3	1.52E-6	1.46E-6	4.62E-3	6.36E-6	2.84E-4	4.21E-6	-2.30E-3	2.61E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.07E-6	3.43E-8	2.73E-13	4.11E-6	1.44E-7	6.85E-7	4.12E-9	-3.09E-6	1.85E-6
NHWD	kg	2.97E-2	8.31E-4	1.05E-6	3.06E-2	3.48E-3	2.00E-2	1.50E-2	-1.20E-2	5.70E-2
RWD	kg	1.54E-5	9.12E-8	1.10E-13	1.55E-5	3.82E-7	1.53E-6	2.23E-8	-4.93E-6	1.25E-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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