Environmental Profile

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

Ecochain v3.5.80

Product:	3043936 - Wafix PP Reducer WT 75x32
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	4.02E-1	2.55E-3	1.45E-4	4.05E-1	2.62E-3	4.13E-1	1.82E-3	-1.89E-1	6.33E-1
GWP-f	kg CO2 eq	4.56E-1	2.55E-3	1.46E-4	4.59E-1	2.62E-3	3.59E-1	1.82E-3	-1.98E-1	6.25E-1
GWP-b	kg CO2 eq	-5.45E-2	1.55E-6	-1.54E-6	-5.45E-2	1.59E-6	5.40E-2	1.76E-6	9.11E-3	8.58E-3
GWP-luluc	kg CO2 eq	3.96E-4	9.03E-7	1.49E-7	3.97E-4	9.27E-7	9.09E-6	3.45E-8	-1.14E-4	2.93E-4
ODP	kg CFC11 eq	8.32E-8	5.88E-10	8.26E-12	8.38E-8	6.04E-10	1.84E-9	4.87E-11	-1.97E-8	6.66E-8
AP	mol H+ eq	2.38E-3	1.45E-5	1.47E-6	2.40E-3	1.49E-5	9.40E-5	1.20E-6	-3.78E-4	2.13E-3
EP-fw	kg P eq	1.41E-5	2.10E-8	8.24E-9	1.42E-5	2.16E-8	2.93E-7	1.58E-9	-2.30E-6	1.22E-5
EP-m	kg N eq	3.93E-4	5.20E-6	1.55E-7	3.98E-4	5.34E-6	3.21E-5	1.89E-6	-8.55E-5	3.52E-4
EP-T	mol N eq	4.44E-3	5.73E-5	1.85E-6	4.50E-3	5.88E-5	3.54E-4	4.78E-6	-9.63E-4	3.96E-3
POCP	kg NMVOC eq	1.94E-3	1.64E-5	6.28E-7	1.95E-3	1.68E-5	9.75E-5	1.75E-6	-3.62E-4	1.71E-3
ADP-mm	kg Sb eq	1.25E-4	6.60E-8	1.97E-8	1.25E-4	6.78E-8	2.35E-7	1.18E-9	-4.63E-6	1.21E-4
ADP-f	MJ	1.29E+1	3.92E-2	1.36E-3	1.29E+1	4.02E-2	1.85E-1	3.58E-3	-4.17E+0	8.98E+0
WDP	m3 depriv.	2.81E-1	1.20E-4	5.22E-5	2.81E-1	1.23E-4	6.22E-3	1.75E-5	-5.54E-2	2.32E-1
PM	disease inc.	2.81E-8	2.30E-10	9.08E-12	2.83E-8	2.36E-10	9.95E-10	2.44E-11	-3.96E-9	2.56E-8
IR	kBq U-235 eq	3.13E-2	1.71E-4	1.02E-6	3.14E-2	1.76E-4	5.65E-4	1.71E-5	-3.31E-3	2.89E-2
ETP-fw	CTUe	9.50E+0	3.18E-2	1.21E-2	9.55E+0	3.26E-2	6.80E-1	6.39E-3	-1.54E+0	8.73E+0
HTP-c	CTUh	2.49E-10	1.13E-12	6.17E-13	2.51E-10	1.16E-12	2.39E-11	9.33E-14	-4.60E-11	2.30E-10
HTP-nc	CTUh	5.61E-9	3.79E-11	1.57E-11	5.67E-9	3.89E-11	4.59E-10	2.76E-12	-6.86E-10	5.48E-9
SQP	Pt	6.66E+0	3.35E-2	2.24E-3	6.69E+0	3.44E-2	1.28E-1	9.11E-3	-5.40E+0	1.47E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.57E+0	5.62E-4	2.40E-2	1.60E+0	5.77E-4	8.83E-3	1.58E-4	-8.80E-1	7.25E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.57E+0	5.62E-4	2.40E-2	1.60E+0	5.77E-4	8.83E-3	1.58E-4	-8.80E-1	7.25E-1
PENRE	MJ	1.38E+1	4.16E-2	1.44E-3	1.38E+1	4.27E-2	1.97E-1	3.79E-3	-4.55E+0	9.49E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.38E+1	4.16E-2	1.44E-3	1.38E+1	4.27E-2	1.97E-1	3.79E-3	-4.55E+0	9.49E+0
PET	MJ	1.53E+1	4.21E-2	2.55E-2	1.54E+1	4.33E-2	2.06E-1	3.95E-3	-5.43E+0	1.02E+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	6.70E-3	4.43E-6	1.46E-6	6.71E-3	4.55E-6	4.81E-4	4.44E-6	-1.15E-3	6.05E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.66E-6	1.00E-7	2.73E-13	6.76E-6	1.03E-7	5.03E-7	4.28E-9	-3.59E-6	3.78E-6
NHWD	kg	4.10E-2	2.43E-3	1.05E-6	4.34E-2	2.49E-3	1.48E-2	1.56E-2	-5.63E-3	7.06E-2
RWD	kg	4.08E-5	2.66E-7	1.10E-13	4.11E-5	2.73E-7	7.23E-7	2.35E-8	-3.81E-6	3.83E-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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