

# Environmental Profile

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

Ecochain v3.5.80



Product: 3043903 - Wafix PP Reducer GY 50x40  
 Unit: 1 piece  
 Manufacturer: Wavin - PL -Buk - Extra products

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



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.

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	☑	☑	☑	☑									

## 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

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.81E-2	5.46E-4	1.45E-4	5.88E-2	8.75E-4	8.78E-2	4.12E-4	-5.04E-2	9.74E-2
GWP-f	kg CO2 eq	1.07E-1	5.46E-4	1.46E-4	1.08E-1	8.74E-4	3.47E-2	4.12E-4	-5.74E-2	8.66E-2
GWP-b	kg CO2 eq	-4.93E-2	3.31E-7	-1.54E-6	-4.93E-2	5.31E-7	5.31E-2	3.57E-7	7.00E-3	1.08E-2
GWP-luluc	kg CO2 eq	1.25E-4	1.93E-7	1.49E-7	1.25E-4	3.09E-7	5.38E-6	7.18E-9	-8.67E-5	4.42E-5
ODP	kg CFC11 eq	6.11E-9	1.26E-10	8.26E-12	6.24E-9	2.01E-10	8.48E-10	1.03E-11	-3.94E-9	3.37E-9
AP	mol H+ eq	4.77E-4	3.11E-6	1.47E-6	4.82E-4	4.98E-6	3.50E-5	2.47E-7	-2.04E-4	3.18E-4
EP-fw	kg P eq	2.93E-6	4.49E-9	8.24E-9	2.94E-6	7.19E-9	1.59E-7	3.27E-10	-1.52E-6	1.59E-6
EP-m	kg N eq	9.04E-5	1.11E-6	1.55E-7	9.16E-5	1.78E-6	1.09E-5	1.59E-7	-4.29E-5	6.15E-5
EP-T	mol N eq	1.00E-3	1.23E-5	1.85E-6	1.01E-3	1.96E-5	1.20E-4	1.00E-6	-4.89E-4	6.65E-4
POCP	kg NMVOC eq	3.91E-4	3.50E-6	6.28E-7	3.95E-4	5.61E-6	3.69E-5	3.76E-7	-1.89E-4	2.50E-4
ADP-mm	kg Sb eq	4.41E-6	1.41E-8	1.97E-8	4.45E-6	2.26E-8	1.35E-7	2.51E-10	-4.54E-7	4.15E-6
ADP-f	MJ	3.08E+0	8.38E-3	1.36E-3	3.09E+0	1.34E-2	9.98E-2	7.56E-4	-1.55E+0	1.65E+0
WDP	m3 depriv.	6.58E-2	2.57E-5	5.22E-5	6.59E-2	4.12E-5	1.79E-3	4.42E-6	-3.69E-2	3.08E-2
PM	disease inc.	5.15E-9	4.93E-11	9.08E-12	5.21E-9	7.89E-11	5.54E-10	5.20E-12	-2.66E-9	3.18E-9
IR	kBq U-235 eq	3.05E-3	3.66E-5	1.02E-6	3.09E-3	5.86E-5	3.21E-4	3.49E-6	-1.45E-3	2.02E-3
ETP-fw	CTUe	2.30E+0	6.80E-3	1.21E-2	2.32E+0	1.09E-2	1.21E-1	6.32E-4	-1.01E+0	1.44E+0
HTP-c	CTUh	8.34E-11	2.42E-13	6.17E-13	8.43E-11	3.88E-13	1.50E-11	1.89E-14	-2.99E-11	6.98E-11
HTP-nc	CTUh	1.53E-9	8.11E-12	1.57E-11	1.56E-9	1.30E-11	1.75E-10	4.10E-13	-3.22E-10	1.42E-9
SQP	Pt	4.69E+0	7.17E-3	2.24E-3	4.70E+0	1.15E-2	7.83E-2	1.94E-3	-4.92E+0	-1.25E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.27E+0	1.20E-4	2.40E-2	1.29E+0	1.92E-4	4.70E-3	2.89E-5	-7.93E-1	5.05E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.27E+0	1.20E-4	2.40E-2	1.29E+0	1.92E-4	4.70E-3	2.89E-5	-7.93E-1	5.05E-1
PENRE	MJ	3.30E+0	8.89E-3	1.44E-3	3.31E+0	1.42E-2	1.06E-1	8.02E-4	-1.67E+0	1.77E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.30E+0	8.89E-3	1.44E-3	3.31E+0	1.42E-2	1.06E-1	8.02E-4	-1.67E+0	1.77E+0
PET	MJ	4.57E+0	9.01E-3	2.55E-2	4.61E+0	1.44E-2	1.11E-1	8.31E-4	-2.46E+0	2.27E+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	1.26E-3	9.48E-7	1.46E-6	1.26E-3	1.52E-6	5.62E-5	9.29E-7	-7.04E-4	6.17E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.20E-6	2.14E-8	2.73E-13	1.22E-6	3.43E-8	1.77E-7	9.16E-10	-9.00E-7	5.31E-7
NHWD	kg	9.60E-3	5.19E-4	1.05E-6	1.01E-2	8.31E-4	5.23E-3	3.32E-3	-3.79E-3	1.57E-2
RWD	kg	3.14E-6	5.70E-8	1.10E-13	3.20E-6	9.12E-8	4.17E-7	4.92E-9	-1.44E-6	2.27E-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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