Environmental Profile

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

Ecochain v3.5.80

Product:	3043886 - Wafix PP Reducer GY 50x32 Short
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	5.45E-2	3.61E-4	1.45E-4	5.50E-2	7.75E-4	8.24E-2	3.65E-4	-4.65E-2	9.21E-2
GWP-f	kg CO2 eq	1.04E-1	3.60E-4	1.46E-4	1.04E-1	7.74E-4	3.13E-2	3.65E-4	-4.97E-2	8.68E-2
GWP-b	kg CO2 eq	-4.91E-2	2.19E-7	-1.54E-6	-4.91E-2	4.70E-7	5.11E-2	3.16E-7	3.30E-3	5.26E-3
GWP-luluc	kg CO2 eq	9.87E-5	1.28E-7	1.49E-7	9.90E-5	2.74E-7	4.66E-6	6.39E-9	-5.85E-5	4.54E-5
ODP	kg CFC11 eq	5.99E-9	8.30E-11	8.26E-12	6.08E-9	1.78E-10	7.06E-10	9.16E-12	-3.45E-9	3.52E-9
AP	mol H+ eq	4.63E-4	2.05E-6	1.47E-6	4.66E-4	4.41E-6	2.94E-5	2.19E-7	-1.69E-4	3.31E-4
EP-fw	kg P eq	2.60E-6	2.97E-9	8.24E-9	2.62E-6	6.37E-9	1.37E-7	2.90E-10	-1.10E-6	1.66E-6
EP-m	kg N eq	8.37E-5	7.34E-7	1.55E-7	8.46E-5	1.58E-6	9.08E-6	1.41E-7	-3.57E-5	5.98E-5
EP-T	mol N eq	9.46E-4	8.09E-6	1.85E-6	9.56E-4	1.74E-5	1.00E-4	8.89E-7	-4.05E-4	6.68E-4
POCP	kg NMVOC eq	3.76E-4	2.31E-6	6.28E-7	3.79E-4	4.97E-6	3.09E-5	3.33E-7	-1.60E-4	2.55E-4
ADP-mm	kg Sb eq	4.83E-6	9.32E-9	1.97E-8	4.86E-6	2.00E-8	1.12E-7	2.23E-10	-3.95E-7	4.60E-6
ADP-f	MJ	3.02E+0	5.53E-3	1.36E-3	3.03E+0	1.19E-2	8.53E-2	6.69E-4	-1.36E+0	1.77E+0
WDP	m3 depriv.	6.59E-2	1.70E-5	5.22E-5	6.59E-2	3.65E-5	1.56E-3	4.02E-6	-2.85E-2	3.90E-2
PM	disease inc.	4.83E-9	3.25E-11	9.08E-12	4.87E-9	6.99E-11	4.66E-10	4.60E-12	-2.13E-9	3.28E-9
IR	kBq U-235 eq	2.98E-3	2.42E-5	1.02E-6	3.00E-3	5.19E-5	2.71E-4	3.09E-6	-1.15E-3	2.18E-3
ETP-fw	CTUe	1.77E+0	4.49E-3	1.21E-2	1.78E+0	9.65E-3	1.00E-1	5.60E-4	-6.61E-1	1.23E+0
HTP-c	CTUh	6.65E-11	1.60E-13	6.17E-13	6.73E-11	3.43E-13	1.31E-11	1.68E-14	-2.67E-11	5.41E-11
HTP-nc	CTUh	1.29E-9	5.35E-12	1.57E-11	1.31E-9	1.15E-11	1.50E-10	3.64E-13	-3.68E-10	1.10E-9
SQP	Pt	4.52E+0	4.73E-3	2.24E-3	4.53E+0	1.02E-2	6.72E-2	1.71E-3	-4.19E+0	4.17E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.12E+0	7.94E-5	2.40E-2	1.15E+0	1.70E-4	4.04E-3	2.56E-5	-6.61E-1	4.89E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.12E+0	7.94E-5	2.40E-2	1.15E+0	1.70E-4	4.04E-3	2.56E-5	-6.61E-1	4.89E-1
PENRE	MJ	3.24E+0	5.87E-3	1.44E-3	3.25E+0	1.26E-2	9.09E-2	7.10E-4	-1.47E+0	1.89E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.24E+0	5.87E-3	1.44E-3	3.25E+0	1.26E-2	9.09E-2	7.10E-4	-1.47E+0	1.89E+0
PET	MJ	4.36E+0	5.95E-3	2.55E-2	4.39E+0	1.28E-2	9.49E-2	7.36E-4	-2.13E+0	2.38E+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	1.24E-3	6.26E-7	1.46E-6	1.25E-3	1.34E-6	4.88E-5	8.22E-7	-5.14E-4	7.84E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.09E-6	1.41E-8	2.73E-13	1.11E-6	3.04E-8	1.49E-7	8.12E-10	-7.22E-7	5.66E-7
NHWD	kg	8.97E-3	3.43E-4	1.05E-6	9.32E-3	7.36E-4	4.54E-3	2.94E-3	-3.26E-3	1.43E-2
RWD	kg	3.09E-6	3.76E-8	1.10E-13	3.13E-6	8.08E-8	3.50E-7	4.36E-9	-1.15E-6	2.42E-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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