Environmental Profile

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

Ecochain v3.5.80

Product:	3043937 - Wafix PP Reducer WT 75x50 SP
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	1.39E-1	7.40E-4	1.45E-4	1.39E-1	1.33E-3	1.64E-1	7.50E-4	-8.57E-2	2.20E-1
GWP-f	kg CO2 eq	1.89E-1	7.39E-4	1.46E-4	1.90E-1	1.33E-3	1.10E-1	7.50E-4	-9.46E-2	2.07E-1
GWP-b	kg CO2 eq	-5.04E-2	4.49E-7	-1.54E-6	-5.04E-2	8.07E-7	5.40E-2	6.89E-7	9.02E-3	1.26E-2
GWP-luluc	kg CO2 eq	1.91E-4	2.62E-7	1.49E-7	1.91E-4	4.70E-7	6.72E-6	1.36E-8	-1.05E-4	9.37E-5
ODP	kg CFC11 eq	2.13E-8	1.70E-10	8.26E-12	2.15E-8	3.06E-10	1.15E-9	1.94E-11	-7.80E-9	1.52E-8
AP	mol H+ eq	8.91E-4	4.21E-6	1.47E-6	8.96E-4	7.57E-6	5.15E-5	4.71E-7	-2.61E-4	6.94E-4
EP-fw	kg P eq	5.38E-6	6.08E-9	8.24E-9	5.40E-6	1.09E-8	2.04E-7	6.22E-10	-1.87E-6	3.75E-6
EP-m	kg N eq	1.59E-4	1.51E-6	1.55E-7	1.61E-4	2.71E-6	1.67E-5	5.39E-7	-5.62E-5	1.24E-4
EP-T	mol N eq	1.77E-3	1.66E-5	1.85E-6	1.78E-3	2.98E-5	1.84E-4	1.90E-6	-6.37E-4	1.36E-3
POCP	kg NMVOC eq	7.37E-4	4.75E-6	6.28E-7	7.42E-4	8.53E-6	5.42E-5	7.03E-7	-2.42E-4	5.64E-4
ADP-mm	kg Sb eq	2.78E-5	1.91E-8	1.97E-8	2.79E-5	3.44E-8	1.71E-7	4.71E-10	-1.37E-6	2.67E-5
ADP-f	MJ	5.45E+0	1.13E-2	1.36E-3	5.46E+0	2.04E-2	1.28E-1	1.42E-3	-2.29E+0	3.32E+0
WDP	m3 depriv.	1.17E-1	3.48E-5	5.22E-5	1.17E-1	6.26E-5	2.91E-3	7.50E-6	-4.55E-2	7.42E-2
PM	disease inc.	1.00E-8	6.67E-11	9.08E-12	1.01E-8	1.20E-10	7.09E-10	9.76E-12	-3.18E-9	7.76E-9
IR	kBq U-235 eq	8.79E-3	4.96E-5	1.02E-6	8.84E-3	8.92E-5	4.07E-4	6.70E-6	-2.02E-3	7.32E-3
ETP-fw	CTUe	3.90E+0	9.22E-3	1.21E-2	3.93E+0	1.66E-2	2.52E-1	1.90E-3	-1.25E+0	2.94E+0
HTP-c	CTUh	1.12E-10	3.28E-13	6.17E-13	1.13E-10	5.89E-13	1.88E-11	3.64E-14	-3.51E-11	9.75E-11
HTP-nc	CTUh	2.30E-9	1.10E-11	1.57E-11	2.33E-9	1.97E-11	2.56E-10	9.44E-13	-4.91E-10	2.12E-9
SQP	Pt	5.14E+0	9.71E-3	2.24E-3	5.16E+0	1.74E-2	9.68E-2	3.64E-3	-5.31E+0	-3.28E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.26E+0	1.63E-4	2.40E-2	1.29E+0	2.93E-4	6.05E-3	5.90E-5	-8.65E-1	4.28E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.26E+0	1.63E-4	2.40E-2	1.29E+0	2.93E-4	6.05E-3	5.90E-5	-8.65E-1	4.28E-1
PENRE	MJ	5.83E+0	1.20E-2	1.44E-3	5.84E+0	2.17E-2	1.37E-1	1.51E-3	-2.48E+0	3.52E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.83E+0	1.20E-2	1.44E-3	5.84E+0	2.17E-2	1.37E-1	1.51E-3	-2.48E+0	3.52E+0
PET	MJ	7.09E+0	1.22E-2	2.55E-2	7.13E+0	2.19E-2	1.43E-1	1.57E-3	-3.35E+0	3.95E+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	2.48E-3	1.28E-6	1.46E-6	2.48E-3	2.31E-6	1.52E-4	1.76E-6	-8.94E-4	1.74E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.28E-6	2.90E-8	2.73E-13	2.31E-6	5.22E-8	2.66E-7	1.71E-9	-1.55E-6	1.08E-6
NHWD	kg	1.59E-2	7.03E-4	1.05E-6	1.66E-2	1.26E-3	7.94E-3	6.24E-3	-4.40E-3	2.77E-2
RWD	kg	1.07E-5	7.72E-8	1.10E-13	1.08E-5	1.39E-7	5.27E-7	9.33E-9	-2.11E-6	9.32E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777