Environmental Profile

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

Ecochain v3.5.80

Product:	3020733 - Wafix PP Reducer WT 75x50 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	1.45E-1	6.53E-4	1.45E-4	1.45E-1	1.82E-3	1.25E-1	8.58E-4	-9.92E-2	1.74E-1
GWP-f	kg CO2 eq	1.94E-1	6.52E-4	1.46E-4	1.94E-1	1.82E-3	7.14E-2	8.58E-4	-1.08E-1	1.60E-1
GWP-b	kg CO2 eq	-4.90E-2	3.96E-7	-1.54E-6	-4.90E-2	1.11E-6	5.39E-2	7.45E-7	8.83E-3	1.37E-2
GWP-luluc	kg CO2 eq	1.64E-4	2.31E-7	1.49E-7	1.64E-4	6.45E-7	1.08E-5	1.49E-8	-1.10E-4	6.58E-5
ODP	kg CFC11 eq	7.84E-9	1.50E-10	8.26E-12	8.00E-9	4.20E-10	1.59E-9	2.16E-11	-6.81E-9	3.22E-9
AP	mol H+ eq	8.08E-4	3.71E-6	1.47E-6	8.14E-4	1.04E-5	6.65E-5	5.16E-7	-3.43E-4	5.48E-4
EP-fw	kg P eq	4.52E-6	5.37E-9	8.24E-9	4.54E-6	1.50E-8	3.17E-7	6.81E-10	-2.22E-6	2.65E-6
EP-m	kg N eq	1.46E-4	1.33E-6	1.55E-7	1.48E-4	3.71E-6	2.03E-5	3.32E-7	-6.85E-5	1.04E-4
EP-T	mol N eq	1.62E-3	1.46E-5	1.85E-6	1.64E-3	4.09E-5	2.23E-4	2.09E-6	-7.72E-4	1.13E-3
POCP	kg NMVOC eq	6.64E-4	4.19E-6	6.28E-7	6.69E-4	1.17E-5	6.94E-5	7.84E-7	-3.12E-4	4.39E-4
ADP-mm	kg Sb eq	5.05E-6	1.69E-8	1.97E-8	5.09E-6	4.71E-8	2.57E-7	5.22E-10	-7.76E-7	4.62E-6
ADP-f	MJ	5.90E+0	1.00E-2	1.36E-3	5.92E+0	2.80E-2	1.96E-1	1.57E-3	-3.04E+0	3.10E+0
WDP	m3 depriv.	1.24E-1	3.07E-5	5.22E-5	1.24E-1	8.58E-5	3.64E-3	9.12E-6	-6.52E-2	6.26E-2
PM	disease inc.	7.96E-9	5.89E-11	9.08E-12	8.03E-9	1.64E-10	1.06E-9	1.08E-11	-3.90E-9	5.36E-9
IR	kBq U-235 eq	4.54E-3	4.38E-5	1.02E-6	4.58E-3	1.22E-4	6.14E-4	7.28E-6	-2.29E-3	3.04E-3
ETP-fw	CTUe	3.27E+0	8.13E-3	1.21E-2	3.29E+0	2.27E-2	2.32E-1	1.32E-3	-1.35E+0	2.20E+0
HTP-c	CTUh	1.16E-10	2.89E-13	6.17E-13	1.17E-10	8.08E-13	2.93E-11	3.94E-14	-3.92E-11	1.08E-10
HTP-nc	CTUh	2.41E-9	9.69E-12	1.57E-11	2.44E-9	2.71E-11	3.44E-10	8.54E-13	-5.90E-10	2.22E-9
SQP	Pt	4.93E+0	8.56E-3	2.24E-3	4.94E+0	2.39E-2	1.54E-1	4.04E-3	-5.31E+0	-1.90E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.84E+0	1.44E-4	2.40E-2	1.87E+0	4.01E-4	9.37E-3	6.03E-5	-8.76E-1	9.99E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.84E+0	1.44E-4	2.40E-2	1.87E+0	4.01E-4	9.37E-3	6.03E-5	-8.76E-1	9.99E-1
PENRE	MJ	6.33E+0	1.06E-2	1.44E-3	6.35E+0	2.97E-2	2.08E-1	1.67E-3	-3.28E+0	3.30E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.33E+0	1.06E-2	1.44E-3	6.35E+0	2.97E-2	2.08E-1	1.67E-3	-3.28E+0	3.30E+0
PET	MJ	8.18E+0	1.08E-2	2.55E-2	8.21E+0	3.01E-2	2.18E-1	1.73E-3	-4.16E+0	4.30E+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	2.21E-3	1.13E-6	1.46E-6	2.21E-3	3.16E-6	1.12E-4	1.94E-6	-1.15E-3	1.18E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.59E-6	2.56E-8	2.73E-13	1.61E-6	7.15E-8	3.38E-7	1.91E-9	-1.37E-6	6.54E-7
NHWD	kg	1.33E-2	6.20E-4	1.05E-6	1.39E-2	1.73E-3	1.03E-2	6.93E-3	-5.11E-3	2.78E-2
RWD	kg	4.34E-6	6.81E-8	1.10E-13	4.41E-6	1.90E-7	7.90E-7	1.03E-8	-2.21E-6	3.19E-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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