

Environmental Profile

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

Ecochain v3.5.80



Product: 3020642 - Wafix PP Branch 88° BK 40x40x40 S/S/S
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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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

This document and supporting material contain confidential and proprietary business information of Wavin - PL -Buk - Extra products. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - PL -Buk - Extra products.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.88E-2	1.21E-3	1.45E-4	1.00E-1	1.81E-3	1.63E-1	8.51E-4	-1.01E-1	1.65E-1
GWP-f	kg CO2 eq	1.97E-1	1.21E-3	1.46E-4	1.98E-1	1.81E-3	6.19E-2	8.51E-4	-1.04E-1	1.59E-1
GWP-b	kg CO2 eq	-9.83E-2	7.35E-7	-1.54E-6	-9.83E-2	1.10E-6	1.01E-1	7.41E-7	3.29E-3	6.09E-3
GWP-luluc	kg CO2 eq	1.74E-4	4.28E-7	1.49E-7	1.75E-4	6.39E-7	1.06E-5	1.45E-8	-9.83E-5	8.77E-5
ODP	kg CFC11 eq	1.27E-8	2.79E-10	8.26E-12	1.30E-8	4.16E-10	1.53E-9	2.14E-11	-6.08E-9	8.89E-9
AP	mol H+ eq	8.50E-4	6.89E-6	1.47E-6	8.59E-4	1.03E-5	6.38E-5	5.09E-7	-3.51E-4	5.82E-4
EP-fw	kg P eq	4.63E-6	9.96E-9	8.24E-9	4.65E-6	1.49E-8	3.09E-7	6.66E-10	-2.01E-6	2.97E-6
EP-m	kg N eq	1.54E-4	2.47E-6	1.55E-7	1.56E-4	3.68E-6	1.94E-5	3.31E-7	-7.24E-5	1.07E-4
EP-T	mol N eq	1.72E-3	2.72E-5	1.85E-6	1.75E-3	4.06E-5	2.13E-4	2.07E-6	-8.21E-4	1.19E-3
POCP	kg NMVOC eq	7.13E-4	7.77E-6	6.28E-7	7.21E-4	1.16E-5	6.63E-5	7.76E-7	-3.34E-4	4.66E-4
ADP-mm	kg Sb eq	1.02E-5	3.13E-8	1.97E-8	1.03E-5	4.67E-8	2.46E-7	5.14E-10	-8.32E-7	9.75E-6
ADP-f	MJ	6.05E+0	1.86E-2	1.36E-3	6.07E+0	2.77E-2	1.91E-1	1.56E-3	-2.99E+0	3.30E+0
WDP	m3 depriv.	1.24E-1	5.70E-5	5.22E-5	1.24E-1	8.51E-5	3.57E-3	8.09E-6	-5.78E-2	7.00E-2
PM	disease inc.	9.21E-9	1.09E-10	9.08E-12	9.33E-9	1.63E-10	1.02E-9	1.07E-11	-4.22E-9	6.30E-9
IR	kBq U-235 eq	6.17E-3	8.12E-5	1.02E-6	6.25E-3	1.21E-4	5.98E-4	7.23E-6	-2.24E-3	4.74E-3
ETP-fw	CTUe	2.83E+0	1.51E-2	1.21E-2	2.85E+0	2.25E-2	2.20E-1	1.30E-3	-1.11E+0	1.99E+0
HTP-c	CTUh	1.12E-10	5.37E-13	6.17E-13	1.13E-10	8.01E-13	2.75E-11	3.83E-14	-5.28E-11	8.88E-11
HTP-nc	CTUh	2.16E-9	1.80E-11	1.57E-11	2.20E-9	2.68E-11	3.26E-10	8.41E-13	-8.14E-10	1.74E-9
SQP	Pt	8.88E+0	1.59E-2	2.24E-3	8.90E+0	2.37E-2	1.51E-1	4.00E-3	-7.86E+0	1.22E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.03E+0	2.67E-4	2.40E-2	2.05E+0	3.98E-4	9.15E-3	6.02E-5	-1.23E+0	8.32E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.03E+0	2.67E-4	2.40E-2	2.05E+0	3.98E-4	9.15E-3	6.02E-5	-1.23E+0	8.32E-1
PENRE	MJ	6.49E+0	1.97E-2	1.44E-3	6.51E+0	2.94E-2	2.04E-1	1.65E-3	-3.22E+0	3.52E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.49E+0	1.97E-2	1.44E-3	6.51E+0	2.94E-2	2.04E-1	1.65E-3	-3.22E+0	3.52E+0
PET	MJ	8.52E+0	2.00E-2	2.55E-2	8.56E+0	2.98E-2	2.13E-1	1.71E-3	-4.45E+0	4.36E+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	2.26E-3	2.10E-6	1.46E-6	2.27E-3	3.14E-6	1.09E-4	1.92E-6	-9.97E-4	1.38E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.99E-6	4.75E-8	2.73E-13	2.04E-6	7.09E-8	3.25E-7	1.88E-9	-1.32E-6	1.11E-6
NHWD	kg	1.55E-2	1.15E-3	1.05E-6	1.66E-2	1.72E-3	9.75E-3	6.87E-3	-6.45E-3	2.85E-2
RWD	kg	6.78E-6	1.26E-7	1.10E-13	6.90E-6	1.89E-7	7.69E-7	1.02E-8	-2.22E-6	5.65E-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