Environmental Profile

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

Ecochain v3.5.80

Product:	3040450 - EVAC Pipe GY 100x3 NFE+NFME L=4 SG/CH
Unit:	1 Piece
Manufacturer:	Wavin - FR - Varennes

The Wavin range of PVC pipes and fittings to be glued covers all the usual diameters and allows you to create networks that are 100% compatible, homogeneous and meet the requirements of the French market.

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	24-11-2022
End of validity:	24-11-2027
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 - FR - Varennes (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	5.74E+0	2.08E-1	2.73E-1	6.22E+0	8.98E-2	2.81E+0	2.54E-2	-3.39E+0	5.76E+0
GWP-f	kg CO2 eq	6.19E+0	2.07E-1	2.20E-1	6.62E+0	8.98E-2	2.29E+0	2.54E-2	-3.36E+0	5.66E+0
GWP-b	kg CO2 eq	-5.00E-1	1.26E-4	5.36E-2	-4.46E-1	5.45E-5	5.22E-1	3.23E-5	-2.37E-2	5.20E-2
GWP-luluc	kg CO2 eq	5.41E-2	7.34E-5	1.57E-4	5.43E-2	3.18E-5	1.05E-3	6.88E-7	-2.26E-3	5.32E-2
ODP	kg CFC11 eq	3.35E-6	4.78E-8	2.82E-8	3.42E-6	2.07E-8	2.80E-7	1.02E-9	-1.69E-6	2.04E-6
AP	mol H+ eq	2.98E-2	1.18E-3	1.03E-3	3.20E-2	5.11E-4	4.89E-3	2.44E-5	-1.30E-2	2.44E-2
EP-fw	kg P eq	2.88E-4	1.71E-6	5.15E-6	2.94E-4	7.39E-7	3.48E-5	3.09E-8	-1.25E-4	2.05E-4
EP-m	kg N eq	5.29E-3	4.23E-4	3.16E-4	6.03E-3	1.83E-4	1.20E-3	1.50E-5	-2.28E-3	5.14E-3
EP-T	mol N eq	5.52E-2	4.66E-3	3.56E-3	6.34E-2	2.02E-3	1.32E-2	9.78E-5	-2.46E-2	5.41E-2
POCP	kg NMVOC eq	1.84E-2	1.33E-3	9.37E-4	2.07E-2	5.76E-4	3.96E-3	3.33E-5	-8.38E-3	1.68E-2
ADP-mm	kg Sb eq	3.82E-3	5.37E-6	3.06E-6	3.83E-3	2.32E-6	1.92E-5	2.43E-8	-6.90E-5	3.78E-3
ADP-f	MJ	1.55E+2	3.18E+0	3.10E+0	1.61E+2	1.38E+0	1.35E+1	7.40E-2	-8.20E+1	9.42E+1
WDP	m3 depriv.	1.02E+1	9.77E-3	6.60E+0	1.68E+1	4.23E-3	5.18E-1	4.42E-4	-4.87E+0	1.24E+1
PM	disease inc.	2.17E-7	1.87E-8	1.57E-8	2.51E-7	8.10E-9	6.16E-8	5.07E-10	-8.50E-8	2.36E-7
IR	kBq U-235 eq	3.40E-1	1.39E-2	9.26E-3	3.63E-1	6.02E-3	4.69E-2	3.39E-4	-1.58E-1	2.58E-1
ETP-fw	CTUe	1.37E+2	2.59E+0	2.38E+0	1.42E+2	1.12E+0	9.87E+1	1.09E+0	-4.92E+1	1.93E+2
HTP-c	CTUh	4.95E-9	9.20E-11	2.08E-10	5.25E-9	3.98E-11	1.50E-9	1.94E-12	-1.81E-9	4.98E-9
HTP-nc	CTUh	1.63E-7	3.08E-9	5.01E-9	1.71E-7	1.33E-9	3.52E-8	2.09E-10	-6.25E-8	1.46E-7
SQP	Pt	6.90E+1	2.72E+0	7.68E+0	7.94E+1	1.18E+0	8.46E+0	1.87E-1	-1.84E+1	7.08E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.49E+1	4.57E-2	1.97E+0	1.69E+1	1.98E-2	9.57E-1	2.65E-3	-5.50E+0	1.24E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.49E+1	4.57E-2	1.97E+0	1.69E+1	1.98E-2	9.57E-1	2.65E-3	-5.50E+0	1.24E+1
PENRE	MJ	1.66E+2	3.38E+0	3.35E+0	1.73E+2	1.46E+0	1.43E+1	7.85E-2	-8.83E+1	1.01E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.66E+2	3.38E+0	3.35E+0	1.73E+2	1.46E+0	1.43E+1	7.85E-2	-8.83E+1	1.01E+2
PET	MJ	1.81E+2	3.43E+0	5.33E+0	1.90E+2	1.48E+0	1.53E+1	8.11E-2	-9.38E+1	1.13E+2
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	1.13E-1	3.60E-4	1.55E-1	2.67E-1	1.56E-4	1.42E-2	9.05E-5	-5.11E-2	2.31E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.57E-4	8.14E-6	4.84E-6	5.70E-4	3.52E-6	2.17E-5	8.93E-8	-6.78E-5	5.27E-4
NHWD	kg	6.48E-1	1.97E-1	3.54E-2	8.81E-1	8.54E-2	5.05E-1	3.41E-1	-2.63E-1	1.55E+0
RWD	kg	2.97E-4	2.17E-5	9.79E-6	3.28E-4	9.37E-6	5.05E-5	4.83E-7	-1.39E-4	2.50E-4
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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