Environmental Profile

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

Ecochain v3.5.80

Product:	3040445 - EVAC Pipe GY 200x3,9 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	1.61E+1	6.07E-1	7.98E-1	1.75E+1	2.61E-1	8.86E+0	7.38E-2	-9.86E+0	1.69E+1
GWP-f	kg CO2 eq	1.81E+1	6.06E-1	6.41E-1	1.94E+1	2.61E-1	6.65E+0	7.37E-2	-9.79E+0	1.66E+1
GWP-b	kg CO2 eq	-2.15E+0	3.68E-4	1.57E-1	-1.99E+0	1.58E-4	2.21E+0	9.40E-5	-6.88E-2	1.52E-1
GWP-luluc	kg CO2 eq	1.56E-1	2.15E-4	4.64E-4	1.57E-1	9.24E-5	3.05E-3	2.00E-6	-6.67E-3	1.53E-1
ODP	kg CFC11 eq	9.76E-6	1.40E-7	8.22E-8	9.98E-6	6.01E-8	8.14E-7	2.97E-9	-4.92E-6	5.94E-6
AP	mol H+ eq	8.74E-2	3.45E-3	3.02E-3	9.38E-2	1.49E-3	1.43E-2	7.11E-5	-3.82E-2	7.15E-2
EP-fw	kg P eq	8.42E-4	4.99E-6	1.50E-5	8.62E-4	2.15E-6	1.01E-4	8.99E-8	-3.66E-4	6.00E-4
EP-m	kg N eq	1.56E-2	1.24E-3	9.27E-4	1.78E-2	5.32E-4	3.51E-3	4.37E-5	-6.71E-3	1.51E-2
EP-T	mol N eq	1.63E-1	1.36E-2	1.04E-2	1.87E-1	5.86E-3	3.87E-2	2.84E-4	-7.29E-2	1.59E-1
POCP	kg NMVOC eq	5.42E-2	3.89E-3	2.75E-3	6.08E-2	1.68E-3	1.16E-2	9.67E-5	-2.46E-2	4.96E-2
ADP-mm	kg Sb eq	1.11E-2	1.57E-5	9.03E-6	1.11E-2	6.75E-6	5.61E-5	7.06E-8	-2.01E-4	1.10E-2
ADP-f	MJ	4.52E+2	9.31E+0	9.04E+0	4.71E+2	4.01E+0	3.92E+1	2.15E-1	-2.38E+2	2.76E+2
WDP	m3 depriv.	2.97E+1	2.86E-2	1.92E+1	4.89E+1	1.23E-2	1.51E+0	1.28E-3	-1.42E+1	3.63E+1
PM	disease inc.	6.65E-7	5.47E-8	4.59E-8	7.66E-7	2.36E-8	1.80E-7	1.47E-9	-2.53E-7	7.18E-7
IR	kBq U-235 eq	9.95E-1	4.07E-2	2.70E-2	1.06E+0	1.75E-2	1.37E-1	9.85E-4	-4.59E-1	7.59E-1
ETP-fw	CTUe	4.01E+2	7.56E+0	6.98E+0	4.15E+2	3.25E+0	2.87E+2	3.16E+0	-1.46E+2	5.63E+2
HTP-c	CTUh	1.47E-8	2.69E-10	6.07E-10	1.55E-8	1.16E-10	4.41E-9	5.63E-12	-5.31E-9	1.48E-8
HTP-nc	CTUh	4.77E-7	9.01E-9	1.47E-8	5.01E-7	3.88E-9	1.03E-7	6.09E-10	-1.83E-7	4.25E-7
SQP	Pt	2.64E+2	7.96E+0	2.30E+1	2.95E+2	3.43E+0	2.47E+1	5.45E-1	-6.70E+1	2.56E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.29E+1	1.33E-1	5.90E+0	5.89E+1	5.75E-2	2.79E+0	7.71E-3	-1.87E+1	4.31E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.29E+1	1.33E-1	5.90E+0	5.89E+1	5.75E-2	2.79E+0	7.71E-3	-1.87E+1	4.31E+1
PENRE	MJ	4.85E+2	9.88E+0	9.78E+0	5.05E+2	4.25E+0	4.17E+1	2.28E-1	-2.57E+2	2.94E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.85E+2	9.88E+0	9.78E+0	5.05E+2	4.25E+0	4.17E+1	2.28E-1	-2.57E+2	2.94E+2
PET	MJ	5.38E+2	1.00E+1	1.57E+1	5.64E+2	4.31E+0	4.45E+1	2.36E-1	-2.76E+2	3.37E+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	3.29E-1	1.05E-3	4.50E-1	7.80E-1	4.53E-4	4.14E-2	2.63E-4	-1.49E-1	6.73E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.63E-3	2.38E-5	1.41E-5	1.66E-3	1.02E-5	6.32E-5	2.60E-7	-1.98E-4	1.54E-3
NHWD	kg	1.92E+0	5.77E-1	1.03E-1	2.60E+0	2.48E-1	1.48E+0	9.92E-1	-7.70E-1	4.55E+0
RWD	kg	8.71E-4	6.33E-5	2.85E-5	9.63E-4	2.72E-5	1.47E-4	1.40E-6	-4.06E-4	7.33E-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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