Environmental Profile

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

Ecochain v3.5.80

Product:	3040447 - EVAC Pipe GY 140x3,2 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	9.35E+0	3.51E-1	4.65E-1	1.02E+1	1.52E-1	5.14E+0	4.28E-2	-5.72E+0	9.78E+0
GWP-f	kg CO2 eq	1.05E+1	3.51E-1	3.73E-1	1.12E+1	1.51E-1	3.86E+0	4.28E-2	-5.68E+0	9.60E+0
GWP-b	kg CO2 eq	-1.25E+0	2.13E-4	9.19E-2	-1.15E+0	9.19E-5	1.28E+0	5.45E-5	-3.99E-2	8.86E-2
GWP-luluc	kg CO2 eq	9.22E-2	1.24E-4	2.76E-4	9.26E-2	5.36E-5	1.77E-3	1.16E-6	-3.87E-3	9.05E-2
ODP	kg CFC11 eq	5.66E-6	8.09E-8	4.79E-8	5.79E-6	3.49E-8	4.72E-7	1.72E-9	-2.85E-6	3.44E-6
AP	mol H+ eq	5.07E-2	2.00E-3	1.79E-3	5.45E-2	8.62E-4	8.28E-3	4.12E-5	-2.21E-2	4.15E-2
EP-fw	kg P eq	4.89E-4	2.89E-6	8.77E-6	5.00E-4	1.25E-6	5.87E-5	5.22E-8	-2.12E-4	3.48E-4
EP-m	kg N eq	9.06E-3	7.15E-4	5.46E-4	1.03E-2	3.09E-4	2.03E-3	2.53E-5	-3.89E-3	8.80E-3
EP-T	mol N eq	9.47E-2	7.88E-3	6.18E-3	1.09E-1	3.40E-3	2.24E-2	1.65E-4	-4.23E-2	9.25E-2
POCP	kg NMVOC eq	3.15E-2	2.25E-3	1.62E-3	3.53E-2	9.72E-4	6.73E-3	5.61E-5	-1.43E-2	2.88E-2
ADP-mm	kg Sb eq	6.47E-3	9.08E-6	5.40E-6	6.48E-3	3.92E-6	3.25E-5	4.10E-8	-1.16E-4	6.40E-3
ADP-f	MJ	2.62E+2	5.39E+0	5.26E+0	2.73E+2	2.32E+0	2.27E+1	1.25E-1	-1.38E+2	1.60E+2
WDP	m3 depriv.	1.72E+1	1.65E-2	1.11E+1	2.84E+1	7.13E-3	8.74E-1	7.44E-4	-8.22E+0	2.10E+1
PM	disease inc.	3.86E-7	3.17E-8	2.70E-8	4.45E-7	1.37E-8	1.04E-7	8.55E-10	-1.47E-7	4.17E-7
IR	kBq U-235 eq	5.77E-1	2.35E-2	1.56E-2	6.17E-1	1.02E-2	7.93E-2	5.72E-4	-2.66E-1	4.40E-1
ETP-fw	CTUe	2.33E+2	4.37E+0	4.13E+0	2.41E+2	1.89E+0	1.67E+2	1.83E+0	-8.46E+1	3.27E+2
HTP-c	CTUh	8.51E-9	1.56E-10	3.55E-10	9.02E-9	6.72E-11	2.56E-9	3.27E-12	-3.08E-9	8.57E-9
HTP-nc	CTUh	2.77E-7	5.21E-9	8.65E-9	2.91E-7	2.25E-9	5.95E-8	3.53E-10	-1.06E-7	2.47E-7
SQP	Pt	1.53E+2	4.61E+0	1.42E+1	1.72E+2	1.99E+0	1.43E+1	3.16E-1	-3.88E+1	1.49E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.07E+1	7.73E-2	3.64E+0	3.44E+1	3.33E-2	1.62E+0	4.47E-3	-1.08E+1	2.52E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.07E+1	7.73E-2	3.64E+0	3.44E+1	3.33E-2	1.62E+0	4.47E-3	-1.08E+1	2.52E+1
PENRE	MJ	2.82E+2	5.72E+0	5.69E+0	2.93E+2	2.47E+0	2.42E+1	1.32E-1	-1.49E+2	1.71E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.82E+2	5.72E+0	5.69E+0	2.93E+2	2.47E+0	2.42E+1	1.32E-1	-1.49E+2	1.71E+2
PET	MJ	3.12E+2	5.80E+0	9.34E+0	3.27E+2	2.50E+0	2.58E+1	1.37E-1	-1.60E+2	1.96E+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	1.91E-1	6.10E-4	2.61E-1	4.52E-1	2.63E-4	2.40E-2	1.53E-4	-8.62E-2	3.91E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.48E-4	1.38E-5	8.17E-6	9.70E-4	5.94E-6	3.67E-5	1.51E-7	-1.15E-4	8.98E-4
NHWD	kg	1.11E+0	3.34E-1	5.98E-2	1.51E+0	1.44E-1	8.60E-1	5.76E-1	-4.46E-1	2.64E+0
RWD	kg	5.05E-4	3.66E-5	1.65E-5	5.58E-4	1.58E-5	8.55E-5	8.15E-7	-2.35E-4	4.25E-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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