Environmental Profile

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

Ecochain v3.5.80

Product:	3026074 - PVC Branch 87°3 GY 100x50 S/S/SP BC
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	7.25E-1	2.89E-2	3.47E-2	7.89E-1	1.05E-2	5.23E-1	3.26E-3	-4.08E-1	9.17E-1
GWP-f	kg CO2 eq	8.97E-1	2.89E-2	2.73E-2	9.54E-1	1.05E-2	2.93E-1	3.26E-3	-5.11E-1	7.49E-1
GWP-b	kg CO2 eq	-1.74E-1	1.75E-5	7.30E-3	-1.66E-1	6.39E-6	2.30E-1	4.09E-6	1.04E-1	1.68E-1
GWP-luluc	kg CO2 eq	1.41E-3	1.02E-5	2.56E-5	1.45E-3	3.73E-6	1.32E-4	8.75E-8	-1.12E-3	4.66E-4
ODP	kg CFC11 eq	4.45E-7	6.66E-9	3.56E-9	4.56E-7	2.43E-9	3.67E-8	1.23E-10	-2.29E-7	2.65E-7
AP	mol H+ eq	4.45E-3	1.65E-4	1.53E-4	4.76E-3	6.00E-5	6.51E-4	3.00E-6	-2.31E-3	3.17E-3
EP-fw	kg P eq	4.53E-5	2.38E-7	6.51E-7	4.62E-5	8.66E-8	4.42E-6	3.93E-9	-2.65E-5	2.42E-5
EP-m	kg N eq	8.70E-4	5.89E-5	4.49E-5	9.74E-4	2.15E-5	1.65E-4	1.83E-6	-4.44E-4	7.18E-4
EP-T	mol N eq	9.33E-3	6.49E-4	5.39E-4	1.05E-2	2.36E-4	1.81E-3	1.19E-5	-4.88E-3	7.69E-3
POCP	kg NMVOC eq	2.87E-3	1.85E-4	1.33E-4	3.19E-3	6.76E-5	5.43E-4	4.10E-6	-1.57E-3	2.24E-3
ADP-mm	kg Sb eq	1.03E-3	7.47E-7	5.24E-7	1.03E-3	2.72E-7	2.58E-6	3.01E-9	-1.00E-5	1.03E-3
ADP-f	MJ	2.14E+1	4.43E-1	3.82E-1	2.22E+1	1.62E-1	1.73E+0	9.00E-3	-1.19E+1	1.22E+1
WDP	m3 depriv.	1.35E+0	1.36E-3	7.72E-1	2.12E+0	4.96E-4	6.53E-2	6.29E-5	-7.89E-1	1.40E+0
PM	disease inc.	3.56E-8	2.61E-9	2.23E-9	4.05E-8	9.50E-10	8.20E-9	6.19E-11	-2.38E-8	2.59E-8
IR	kBq U-235 eq	5.10E-2	1.94E-3	1.10E-3	5.40E-2	7.06E-4	6.19E-3	4.12E-5	-2.80E-2	3.29E-2
ETP-fw	CTUe	3.59E+1	3.60E-1	3.58E-1	3.66E+1	1.31E-1	1.27E+1	1.39E-1	-1.49E+1	3.48E+1
HTP-c	CTUh	8.35E-10	1.28E-11	2.78E-11	8.76E-10	4.67E-12	2.00E-10	2.49E-13	-3.58E-10	7.22E-10
HTP-nc	CTUh	2.50E-8	4.29E-10	7.16E-10	2.62E-8	1.56E-10	4.55E-9	2.67E-11	-1.06E-8	2.03E-8
SQP	Pt	2.24E+1	3.79E-1	1.76E+0	2.45E+1	1.38E-1	1.07E+0	2.30E-2	-3.32E+1	-7.50E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.12E+0	6.36E-3	4.49E-1	4.57E+0	2.32E-3	1.21E-1	3.29E-4	-5.87E+0	-1.18E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.12E+0	6.36E-3	4.49E-1	4.57E+0	2.32E-3	1.21E-1	3.29E-4	-5.87E+0	-1.18E+0
PENRE	MJ	2.29E+1	4.71E-1	4.13E-1	2.38E+1	1.72E-1	1.84E+0	9.56E-3	-1.28E+1	1.31E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.29E+1	4.71E-1	4.13E-1	2.38E+1	1.72E-1	1.84E+0	9.56E-3	-1.28E+1	1.31E+1
PET	MJ	2.70E+1	4.77E-1	8.62E-1	2.84E+1	1.74E-1	1.97E+0	9.88E-3	-1.86E+1	1.19E+1
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	1.61E-2	5.02E-5	1.81E-2	3.43E-2	1.83E-5	1.80E-3	1.10E-5	-1.08E-2	2.53E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.47E-4	1.13E-6	5.65E-7	1.49E-4	4.13E-7	2.91E-6	1.10E-8	-1.10E-5	1.41E-4
NHWD	kg	1.08E-1	2.75E-2	4.14E-3	1.39E-1	1.00E-2	6.38E-2	4.00E-2	-4.90E-2	2.04E-1
RWD	kg	4.54E-5	3.02E-6	1.14E-6	4.95E-5	1.10E-6	6.79E-6	5.85E-8	-2.55E-5	3.20E-5
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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