Environmental Profile

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

Ecochain v3.5.80

Product:	3026041 - PVC Bend 67°3 GY 100 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.35E-1	2.02E-2	2.45E-2	5.80E-1	7.48E-3	3.66E-1	2.32E-3	-3.07E-1	6.49E-1
GWP-f	kg CO2 eq	6.43E-1	2.02E-2	1.94E-2	6.83E-1	7.48E-3	2.25E-1	2.32E-3	-3.64E-1	5.53E-1
GWP-b	kg CO2 eq	-1.09E-1	1.23E-5	5.16E-3	-1.03E-1	4.54E-6	1.41E-1	2.91E-6	5.83E-2	9.56E-2
GWP-luluc	kg CO2 eq	9.24E-4	7.15E-6	1.81E-5	9.49E-4	2.65E-6	9.32E-5	6.23E-8	-6.76E-4	3.68E-4
ODP	kg CFC11 eq	3.15E-7	4.65E-9	2.52E-9	3.22E-7	1.72E-9	2.58E-8	8.77E-11	-1.63E-7	1.87E-7
AP	mol H+ eq	3.17E-3	1.15E-4	1.08E-4	3.39E-3	4.26E-5	4.56E-4	2.13E-6	-1.56E-3	2.33E-3
EP-fw	kg P eq	3.18E-5	1.66E-7	4.61E-7	3.24E-5	6.15E-8	3.12E-6	2.80E-9	-1.74E-5	1.82E-5
EP-m	kg N eq	6.05E-4	4.12E-5	3.18E-5	6.78E-4	1.52E-5	1.15E-4	1.30E-6	-2.98E-4	5.12E-4
EP-T	mol N eq	6.53E-3	4.53E-4	3.81E-4	7.36E-3	1.68E-4	1.27E-3	8.49E-6	-3.26E-3	5.55E-3
POCP	kg NMVOC eq	2.05E-3	1.30E-4	9.40E-5	2.28E-3	4.80E-5	3.79E-4	2.92E-6	-1.06E-3	1.65E-3
ADP-mm	kg Sb eq	7.38E-4	5.22E-7	3.70E-7	7.39E-4	1.93E-7	1.80E-6	2.14E-9	-7.00E-6	7.34E-4
ADP-f	MJ	1.55E+1	3.10E-1	2.70E-1	1.61E+1	1.15E-1	1.22E+0	6.40E-3	-8.46E+0	8.97E+0
WDP	m3 depriv.	9.69E-1	9.51E-4	5.46E-1	1.52E+0	3.52E-4	4.63E-2	4.53E-5	-5.38E-1	1.02E+0
PM	disease inc.	2.47E-8	1.82E-9	1.58E-9	2.81E-8	6.75E-10	5.73E-9	4.40E-11	-1.52E-8	1.93E-8
IR	kBq U-235 eq	3.61E-2	1.35E-3	7.77E-4	3.82E-2	5.02E-4	4.34E-3	2.93E-5	-1.89E-2	2.42E-2
ETP-fw	CTUe	2.38E+1	2.52E-1	2.53E-1	2.43E+1	9.32E-2	9.01E+0	9.84E-2	-9.33E+0	2.42E+1
HTP-c	CTUh	5.86E-10	8.96E-12	1.96E-11	6.15E-10	3.32E-12	1.42E-10	1.78E-13	-2.40E-10	5.20E-10
HTP-nc	CTUh	1.77E-8	3.00E-10	5.07E-10	1.85E-8	1.11E-10	3.22E-9	1.90E-11	-7.22E-9	1.47E-8
SQP	Pt	1.40E+1	2.65E-1	1.24E+0	1.55E+1	9.82E-2	7.51E-1	1.63E-2	-1.97E+1	-3.26E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.63E+0	4.45E-3	3.17E-1	2.95E+0	1.65E-3	8.56E-2	2.34E-4	-3.49E+0	-4.56E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.63E+0	4.45E-3	3.17E-1	2.95E+0	1.65E-3	8.56E-2	2.34E-4	-3.49E+0	-4.56E-1
PENRE	MJ	1.66E+1	3.29E-1	2.92E-1	1.73E+1	1.22E-1	1.30E+0	6.79E-3	-9.11E+0	9.58E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.66E+1	3.29E-1	2.92E-1	1.73E+1	1.22E-1	1.30E+0	6.79E-3	-9.11E+0	9.58E+0
PET	MJ	1.93E+1	3.33E-1	6.09E-1	2.02E+1	1.23E-1	1.38E+0	7.02E-3	-1.26E+1	9.12E+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	1.16E-2	3.51E-5	1.28E-2	2.44E-2	1.30E-5	1.28E-3	7.81E-6	-7.07E-3	1.87E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.05E-4	7.93E-7	4.00E-7	1.06E-4	2.93E-7	2.04E-6	7.81E-9	-7.77E-6	1.00E-4
NHWD	kg	7.48E-2	1.92E-2	2.93E-3	9.69E-2	7.11E-3	4.56E-2	2.84E-2	-3.30E-2	1.45E-1
RWD	kg	3.20E-5	2.11E-6	8.09E-7	3.49E-5	7.80E-7	4.73E-6	4.16E-8	-1.72E-5	2.33E-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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