Environmental Profile

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

Ecochain v3.5.80

Product:	3025703 - PVC Expans Branch 67°3 GY 100 SC/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	1.00E+0	3.74E-2	4.85E-2	1.09E+0	1.38E-2	6.16E-1	4.45E-3	-5.55E-1	1.17E+0
GWP-f	kg CO2 eq	1.15E+0	3.74E-2	3.78E-2	1.22E+0	1.38E-2	4.15E-1	4.45E-3	-6.44E-1	1.01E+0
GWP-b	kg CO2 eq	-1.50E-1	2.27E-5	1.07E-2	-1.39E-1	8.35E-6	2.01E-1	5.45E-6	9.02E-2	1.52E-1
GWP-luluc	kg CO2 eq	1.55E-3	1.32E-5	4.09E-5	1.60E-3	4.87E-6	1.66E-4	1.16E-7	-1.09E-3	6.85E-4
ODP	kg CFC11 eq	5.58E-7	8.62E-9	4.98E-9	5.72E-7	3.17E-9	4.54E-8	1.64E-10	-2.85E-7	3.35E-7
AP	mol H+ eq	5.65E-3	2.13E-4	2.34E-4	6.10E-3	7.84E-5	8.08E-4	3.98E-6	-2.71E-3	4.28E-3
EP-fw	kg P eq	5.55E-5	3.08E-7	9.10E-7	5.68E-5	1.13E-7	5.53E-6	5.23E-9	-2.95E-5	3.29E-5
EP-m	kg N eq	1.06E-3	7.62E-5	6.72E-5	1.20E-3	2.80E-5	2.03E-4	2.58E-6	-5.09E-4	9.28E-4
EP-T	mol N eq	1.15E-2	8.40E-4	8.33E-4	1.32E-2	3.09E-4	2.24E-3	1.59E-5	-5.56E-3	1.02E-2
POCP	kg NMVOC eq	3.66E-3	2.40E-4	1.99E-4	4.10E-3	8.83E-5	6.70E-4	5.47E-6	-1.83E-3	3.04E-3
ADP-mm	kg Sb eq	1.34E-3	9.67E-7	8.55E-7	1.35E-3	3.56E-7	3.18E-6	4.00E-9	-1.28E-5	1.34E-3
ADP-f	MJ	2.82E+1	5.74E-1	5.24E-1	2.93E+1	2.11E-1	2.17E+0	1.19E-2	-1.52E+1	1.65E+1
WDP	m3 depriv.	1.72E+0	1.76E-3	1.02E+0	2.74E+0	6.48E-4	8.23E-2	8.40E-5	-9.37E-1	1.89E+0
PM	disease inc.	4.40E-8	3.38E-9	3.34E-9	5.07E-8	1.24E-9	1.02E-8	8.21E-11	-2.53E-8	3.69E-8
IR	kBq U-235 eq	6.55E-2	2.51E-3	1.47E-3	6.95E-2	9.23E-4	7.67E-3	5.48E-5	-3.26E-2	4.56E-2
ETP-fw	CTUe	4.10E+1	4.66E-1	5.52E-1	4.20E+1	1.71E-1	1.59E+1	1.74E-1	-1.54E+1	4.29E+1
HTP-c	CTUh	1.03E-9	1.66E-11	4.02E-11	1.09E-9	6.10E-12	2.50E-10	3.31E-13	-4.04E-10	9.42E-10
HTP-nc	CTUh	3.14E-8	5.56E-10	1.08E-9	3.31E-8	2.04E-10	5.69E-9	3.37E-11	-1.24E-8	2.66E-8
SQP	Pt	2.09E+1	4.91E-1	3.18E+0	2.46E+1	1.81E-1	1.34E+0	3.05E-2	-2.95E+1	-3.41E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.04E+0	8.24E-3	8.08E-1	4.86E+0	3.03E-3	1.52E-1	4.40E-4	-5.32E+0	-3.05E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.04E+0	8.24E-3	8.08E-1	4.86E+0	3.03E-3	1.52E-1	4.40E-4	-5.32E+0	-3.05E-1
PENRE	MJ	3.03E+1	6.09E-1	5.67E-1	3.15E+1	2.24E-1	2.31E+0	1.27E-2	-1.64E+1	1.76E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.03E+1	6.09E-1	5.67E-1	3.15E+1	2.24E-1	2.31E+0	1.27E-2	-1.64E+1	1.76E+1
PET	MJ	3.43E+1	6.18E-1	1.37E+0	3.63E+1	2.27E-1	2.46E+0	1.31E-2	-2.17E+1	1.73E+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	2.06E-2	6.50E-5	2.39E-2	4.46E-2	2.39E-5	2.30E-3	1.46E-5	-1.21E-2	3.49E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.88E-4	1.47E-6	7.47E-7	1.90E-4	5.40E-7	3.62E-6	1.46E-8	-1.34E-5	1.81E-4
NHWD	kg	1.30E-1	3.56E-2	5.48E-3	1.71E-1	1.31E-2	8.08E-2	5.31E-2	-5.60E-2	2.62E-1
RWD	kg	5.95E-5	3.90E-6	1.51E-6	6.49E-5	1.44E-6	8.37E-6	7.77E-8	-2.95E-5	4.53E-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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