Environmental Profile

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

Ecochain v3.5.80

Product:	3026029 - PVC Branch 45° GY 100 S/S/S 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	8.75E-1	3.26E-2	3.78E-2	9.46E-1	1.25E-2	5.53E-1	3.86E-3	-5.23E-1	9.92E-1
GWP-f	kg CO2 eq	1.03E+0	3.25E-2	3.04E-2	1.09E+0	1.24E-2	3.67E-1	3.86E-3	-5.78E-1	8.93E-1
GWP-b	kg CO2 eq	-1.51E-1	1.98E-5	7.39E-3	-1.43E-1	7.56E-6	1.86E-1	4.85E-6	5.64E-2	9.90E-2
GWP-luluc	kg CO2 eq	1.29E-3	1.15E-5	2.16E-5	1.32E-3	4.41E-6	1.54E-4	1.03E-7	-8.28E-4	6.56E-4
ODP	kg CFC11 eq	5.19E-7	7.50E-9	3.90E-9	5.31E-7	2.87E-9	4.25E-8	1.46E-10	-2.68E-7	3.09E-7
AP	mol H+ eq	5.01E-3	1.85E-4	1.42E-4	5.34E-3	7.09E-5	7.40E-4	3.55E-6	-2.38E-3	3.77E-3
EP-fw	kg P eq	5.01E-5	2.68E-7	7.13E-7	5.11E-5	1.02E-7	5.16E-6	4.65E-9	-2.52E-5	3.11E-5
EP-m	kg N eq	9.27E-4	6.63E-5	4.36E-5	1.04E-3	2.54E-5	1.84E-4	2.17E-6	-4.44E-4	8.05E-4
EP-T	mol N eq	1.01E-2	7.31E-4	4.90E-4	1.13E-2	2.80E-4	2.02E-3	1.41E-5	-4.82E-3	8.80E-3
POCP	kg NMVOC eq	3.22E-3	2.09E-4	1.29E-4	3.56E-3	7.99E-5	6.06E-4	4.85E-6	-1.61E-3	2.65E-3
ADP-mm	kg Sb eq	1.23E-3	8.42E-7	4.20E-7	1.23E-3	3.22E-7	2.92E-6	3.56E-9	-1.13E-5	1.22E-3
ADP-f	MJ	2.51E+1	5.00E-1	4.29E-1	2.60E+1	1.91E-1	1.99E+0	1.07E-2	-1.36E+1	1.46E+1
WDP	m3 depriv.	1.60E+0	1.53E-3	9.15E-1	2.51E+0	5.87E-4	7.69E-2	7.43E-5	-8.37E-1	1.76E+0
PM	disease inc.	3.70E-8	2.94E-9	2.16E-9	4.21E-8	1.12E-9	9.24E-9	7.32E-11	-2.09E-8	3.16E-8
IR	kBq U-235 eq	5.79E-2	2.18E-3	1.28E-3	6.13E-2	8.35E-4	7.05E-3	4.88E-5	-2.88E-2	4.05E-2
ETP-fw	CTUe	3.44E+1	4.06E-1	3.28E-1	3.52E+1	1.55E-1	1.50E+1	1.64E-1	-1.23E+1	3.81E+1
HTP-c	CTUh	9.42E-10	1.44E-11	2.87E-11	9.85E-10	5.52E-12	2.29E-10	2.95E-13	-3.66E-10	8.54E-10
HTP-nc	CTUh	2.88E-8	4.84E-10	6.91E-10	3.00E-8	1.85E-10	5.30E-9	3.16E-11	-1.11E-8	2.44E-8
SQP	Pt	1.92E+1	4.27E-1	1.04E+0	2.06E+1	1.64E-1	1.23E+0	2.72E-2	-2.33E+1	-1.25E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.67E+0	7.17E-3	2.68E-1	3.94E+0	2.74E-3	1.42E-1	3.90E-4	-4.17E+0	-8.66E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.67E+0	7.17E-3	2.68E-1	3.94E+0	2.74E-3	1.42E-1	3.90E-4	-4.17E+0	-8.66E-2
PENRE	MJ	2.69E+1	5.30E-1	4.64E-1	2.79E+1	2.03E-1	2.12E+0	1.13E-2	-1.47E+1	1.56E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.69E+1	5.30E-1	4.64E-1	2.79E+1	2.03E-1	2.12E+0	1.13E-2	-1.47E+1	1.56E+1
PET	MJ	3.06E+1	5.38E-1	7.32E-1	3.18E+1	2.06E-1	2.26E+0	1.17E-2	-1.88E+1	1.55E+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	1.87E-2	5.65E-5	2.14E-2	4.02E-2	2.16E-5	2.12E-3	1.30E-5	-1.02E-2	3.21E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.73E-4	1.28E-6	6.70E-7	1.75E-4	4.89E-7	3.29E-6	1.30E-8	-1.22E-5	1.67E-4
NHWD	kg	1.16E-1	3.10E-2	4.90E-3	1.52E-1	1.18E-2	7.40E-2	4.74E-2	-5.06E-2	2.34E-1
RWD	kg	5.08E-5	3.40E-6	1.36E-6	5.56E-5	1.30E-6	7.63E-6	6.92E-8	-2.60E-5	3.86E-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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