Environmental Profile

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

Ecochain v3.5.80

Product:	3026017 - PVC Branch 45° GY 80 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.56E-1	1.87E-2	2.62E-2	6.01E-1	7.96E-3	3.31E-1	2.45E-3	-3.17E-1	6.25E-1
GWP-f	kg CO2 eq	6.41E-1	1.87E-2	2.07E-2	6.80E-1	7.95E-3	2.18E-1	2.45E-3	-3.63E-1	5.46E-1
GWP-b	kg CO2 eq	-8.51E-2	1.13E-5	5.55E-3	-7.95E-2	4.83E-6	1.12E-1	3.10E-6	4.61E-2	7.90E-2
GWP-luluc	kg CO2 eq	8.42E-4	6.61E-6	1.97E-5	8.69E-4	2.81E-6	9.92E-5	6.51E-8	-5.93E-4	3.78E-4
ODP	kg CFC11 eq	3.35E-7	4.31E-9	2.70E-9	3.42E-7	1.83E-9	2.74E-8	9.31E-11	-1.70E-7	2.01E-7
AP	mol H+ eq	3.11E-3	1.06E-4	1.17E-4	3.33E-3	4.53E-5	4.76E-4	2.26E-6	-1.55E-3	2.31E-3
EP-fw	kg P eq	3.14E-5	1.54E-7	4.93E-7	3.20E-5	6.54E-8	3.32E-6	2.94E-9	-1.69E-5	1.86E-5
EP-m	kg N eq	5.80E-4	3.81E-5	3.42E-5	6.53E-4	1.62E-5	1.18E-4	1.39E-6	-2.89E-4	5.00E-4
EP-T	mol N eq	6.25E-3	4.20E-4	4.12E-4	7.09E-3	1.79E-4	1.30E-3	9.01E-6	-3.14E-3	5.43E-3
POCP	kg NMVOC eq	1.98E-3	1.20E-4	1.01E-4	2.20E-3	5.10E-5	3.90E-4	3.09E-6	-1.03E-3	1.61E-3
ADP-mm	kg Sb eq	6.42E-4	4.84E-7	4.03E-7	6.43E-4	2.06E-7	1.89E-6	2.26E-9	-7.25E-6	6.38E-4
ADP-f	MJ	1.57E+1	2.87E-1	2.89E-1	1.62E+1	1.22E-1	1.28E+0	6.79E-3	-8.57E+0	9.07E+0
WDP	m3 depriv.	1.01E+0	8.80E-4	5.81E-1	1.59E+0	3.74E-4	4.95E-2	4.42E-5	-5.47E-1	1.10E+0
PM	disease inc.	2.33E-8	1.69E-9	1.70E-9	2.67E-8	7.18E-10	5.95E-9	4.67E-11	-1.40E-8	1.94E-8
IR	kBq U-235 eq	3.65E-2	1.25E-3	8.28E-4	3.86E-2	5.33E-4	4.55E-3	3.12E-5	-1.88E-2	2.49E-2
ETP-fw	CTUe	2.16E+1	2.33E-1	2.74E-1	2.21E+1	9.91E-2	9.66E+0	1.06E-1	-8.58E+0	2.34E+1
HTP-c	CTUh	5.66E-10	8.29E-12	2.11E-11	5.95E-10	3.53E-12	1.44E-10	1.86E-13	-2.34E-10	5.08E-10
HTP-nc	CTUh	1.75E-8	2.78E-10	5.46E-10	1.83E-8	1.18E-10	3.40E-9	2.03E-11	-7.25E-9	1.46E-8
SQP	Pt	1.16E+1	2.45E-1	1.37E+0	1.32E+1	1.04E-1	7.87E-1	1.73E-2	-1.59E+1	-1.78E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.27E+0	4.12E-3	3.50E-1	2.62E+0	1.75E-3	9.11E-2	2.50E-4	-2.88E+0	-1.65E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.27E+0	4.12E-3	3.50E-1	2.62E+0	1.75E-3	9.11E-2	2.50E-4	-2.88E+0	-1.65E-1
PENRE	MJ	1.68E+1	3.05E-1	3.12E-1	1.74E+1	1.30E-1	1.36E+0	7.20E-3	-9.21E+0	9.69E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.68E+1	3.05E-1	3.12E-1	1.74E+1	1.30E-1	1.36E+0	7.20E-3	-9.21E+0	9.69E+0
PET	MJ	1.91E+1	3.09E-1	6.62E-1	2.00E+1	1.31E-1	1.45E+0	7.45E-3	-1.21E+1	9.53E+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	3.25E-5	1.36E-2	2.52E-2	1.38E-5	1.36E-3	8.31E-6	-6.86E-3	1.98E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.26E-5	7.34E-7	4.25E-7	9.38E-5	3.12E-7	2.12E-6	8.26E-9	-7.66E-6	8.86E-5
NHWD	kg	7.28E-2	1.78E-2	3.12E-3	9.37E-2	7.56E-3	4.68E-2	3.02E-2	-3.26E-2	1.46E-1
RWD	kg	3.23E-5	1.95E-6	8.61E-7	3.51E-5	8.30E-7	4.93E-6	4.42E-8	-1.70E-5	2.40E-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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