Environmental Profile

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

Ecochain v3.5.80

Product:	3026008 - PVC Branch 87°3 GY 100 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	7.51E-1	2.72E-2	3.21E-2	8.10E-1	1.05E-2	4.45E-1	3.24E-3	-4.43E-1	8.26E-1
GWP-f	kg CO2 eq	8.57E-1	2.71E-2	2.57E-2	9.10E-1	1.05E-2	3.12E-1	3.24E-3	-4.82E-1	7.53E-1
GWP-b	kg CO2 eq	-1.07E-1	1.65E-5	6.36E-3	-1.00E-1	6.36E-6	1.33E-1	4.07E-6	3.98E-2	7.22E-2
GWP-luluc	kg CO2 eq	1.04E-3	9.61E-6	1.93E-5	1.07E-3	3.71E-6	1.30E-4	8.71E-8	-6.34E-4	5.65E-4
ODP	kg CFC11 eq	4.35E-7	6.26E-9	3.31E-9	4.45E-7	2.41E-9	3.56E-8	1.23E-10	-2.24E-7	2.59E-7
AP	mol H+ eq	4.18E-3	1.55E-4	1.24E-4	4.46E-3	5.97E-5	6.18E-4	2.98E-6	-1.95E-3	3.19E-3
EP-fw	kg P eq	4.16E-5	2.23E-7	6.05E-7	4.25E-5	8.62E-8	4.33E-6	3.91E-9	-2.04E-5	2.64E-5
EP-m	kg N eq	7.65E-4	5.53E-5	3.78E-5	8.58E-4	2.14E-5	1.53E-4	1.82E-6	-3.60E-4	6.74E-4
EP-T	mol N eq	8.34E-3	6.10E-4	4.30E-4	9.38E-3	2.35E-4	1.69E-3	1.19E-5	-3.91E-3	7.40E-3
POCP	kg NMVOC eq	2.68E-3	1.74E-4	1.12E-4	2.97E-3	6.73E-5	5.05E-4	4.08E-6	-1.31E-3	2.23E-3
ADP-mm	kg Sb eq	1.03E-3	7.02E-7	3.78E-7	1.03E-3	2.71E-7	2.44E-6	3.00E-9	-9.42E-6	1.03E-3
ADP-f	MJ	2.11E+1	4.17E-1	3.63E-1	2.18E+1	1.61E-1	1.67E+0	8.96E-3	-1.14E+1	1.23E+1
WDP	m3 depriv.	1.34E+0	1.28E-3	7.67E-1	2.11E+0	4.94E-4	6.46E-2	6.27E-5	-6.92E-1	1.48E+0
PM	disease inc.	3.03E-8	2.45E-9	1.87E-9	3.46E-8	9.46E-10	7.71E-9	6.16E-11	-1.65E-8	2.69E-8
IR	kBq U-235 eq	4.83E-2	1.82E-3	1.08E-3	5.12E-2	7.03E-4	5.89E-3	4.10E-5	-2.36E-2	3.42E-2
ETP-fw	CTUe	2.80E+1	3.38E-1	2.87E-1	2.86E+1	1.31E-1	1.26E+1	1.38E-1	-9.72E+0	3.17E+1
HTP-c	CTUh	7.80E-10	1.20E-11	2.46E-11	8.17E-10	4.65E-12	1.92E-10	2.48E-13	-2.96E-10	7.18E-10
HTP-nc	CTUh	2.41E-8	4.03E-10	6.00E-10	2.51E-8	1.56E-10	4.45E-9	2.66E-11	-9.14E-9	2.06E-8
SQP	Pt	1.41E+1	3.56E-1	1.01E+0	1.55E+1	1.38E-1	1.03E+0	2.29E-2	-1.68E+1	-1.19E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.78E+0	5.98E-3	2.59E-1	3.04E+0	2.31E-3	1.19E-1	3.28E-4	-3.05E+0	1.16E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.78E+0	5.98E-3	2.59E-1	3.04E+0	2.31E-3	1.19E-1	3.28E-4	-3.05E+0	1.16E-1
PENRE	MJ	2.26E+1	4.42E-1	3.93E-1	2.34E+1	1.71E-1	1.77E+0	9.51E-3	-1.22E+1	1.31E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.26E+1	4.42E-1	3.93E-1	2.34E+1	1.71E-1	1.77E+0	9.51E-3	-1.22E+1	1.31E+1
PET	MJ	2.54E+1	4.48E-1	6.51E-1	2.65E+1	1.73E-1	1.89E+0	9.83E-3	-1.53E+1	1.32E+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	1.57E-2	4.72E-5	1.80E-2	3.37E-2	1.82E-5	1.78E-3	1.09E-5	-8.28E-3	2.72E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.45E-4	1.07E-6	5.62E-7	1.47E-4	4.11E-7	2.74E-6	1.09E-8	-1.01E-5	1.40E-4
NHWD	kg	9.55E-2	2.58E-2	4.11E-3	1.25E-1	9.97E-3	6.21E-2	3.98E-2	-4.12E-2	1.96E-1
RWD	kg	4.24E-5	2.83E-6	1.14E-6	4.63E-5	1.09E-6	6.37E-6	5.82E-8	-2.12E-5	3.26E-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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