Environmental Profile

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

Ecochain v3.5.80

Product:	3026052 - PVC Elbow 87°3 GY 100 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.85E-1	2.12E-2	2.46E-2	6.31E-1	8.17E-3	3.50E-1	2.53E-3	-3.45E-1	6.46E-1
GWP-f	kg CO2 eq	6.70E-1	2.12E-2	1.98E-2	7.11E-1	8.16E-3	2.44E-1	2.53E-3	-3.77E-1	5.88E-1
GWP-b	kg CO2 eq	-8.56E-2	1.29E-5	4.82E-3	-8.07E-2	4.96E-6	1.06E-1	3.17E-6	3.19E-2	5.75E-2
GWP-luluc	kg CO2 eq	8.18E-4	7.51E-6	1.41E-5	8.39E-4	2.89E-6	1.01E-4	6.81E-8	-5.01E-4	4.42E-4
ODP	kg CFC11 eq	3.38E-7	4.89E-9	2.54E-9	3.46E-7	1.88E-9	2.77E-8	9.57E-11	-1.75E-7	2.01E-7
AP	mol H+ eq	3.28E-3	1.21E-4	9.26E-5	3.49E-3	4.65E-5	4.81E-4	2.33E-6	-1.53E-3	2.49E-3
EP-fw	kg P eq	3.26E-5	1.75E-7	4.65E-7	3.32E-5	6.71E-8	3.37E-6	3.06E-9	-1.60E-5	2.07E-5
EP-m	kg N eq	6.01E-4	4.33E-5	2.85E-5	6.73E-4	1.66E-5	1.19E-4	1.42E-6	-2.83E-4	5.27E-4
EP-T	mol N eq	6.55E-3	4.77E-4	3.19E-4	7.35E-3	1.83E-4	1.32E-3	9.27E-6	-3.06E-3	5.79E-3
POCP	kg NMVOC eq	2.10E-3	1.36E-4	8.43E-5	2.32E-3	5.24E-5	3.94E-4	3.18E-6	-1.02E-3	1.75E-3
ADP-mm	kg Sb eq	8.35E-4	5.49E-7	2.74E-7	8.36E-4	2.11E-7	1.90E-6	2.34E-9	-7.35E-6	8.31E-4
ADP-f	MJ	1.64E+1	3.26E-1	2.80E-1	1.70E+1	1.25E-1	1.30E+0	6.98E-3	-8.88E+0	9.59E+0
WDP	m3 depriv.	1.05E+0	1.00E-3	5.96E-1	1.64E+0	3.84E-4	5.02E-2	4.99E-5	-5.41E-1	1.15E+0
PM	disease inc.	2.39E-8	1.92E-9	1.41E-9	2.72E-8	7.37E-10	6.01E-9	4.80E-11	-1.30E-8	2.10E-8
IR	kBq U-235 eq	3.78E-2	1.42E-3	8.35E-4	4.01E-2	5.47E-4	4.59E-3	3.20E-5	-1.85E-2	2.68E-2
ETP-fw	CTUe	2.22E+1	2.65E-1	2.14E-1	2.27E+1	1.02E-1	9.76E+0	1.07E-1	-7.65E+0	2.50E+1
HTP-c	CTUh	6.16E-10	9.42E-12	1.87E-11	6.44E-10	3.62E-12	1.50E-10	1.94E-13	-2.32E-10	5.66E-10
HTP-nc	CTUh	1.90E-8	3.15E-10	4.51E-10	1.97E-8	1.21E-10	3.46E-9	2.07E-11	-7.15E-9	1.62E-8
SQP	Pt	1.13E+1	2.79E-1	6.81E-1	1.22E+1	1.07E-1	8.01E-1	1.78E-2	-1.34E+1	-2.77E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.20E+0	4.68E-3	1.75E-1	2.38E+0	1.80E-3	9.24E-2	2.55E-4	-2.43E+0	4.72E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.20E+0	4.68E-3	1.75E-1	2.38E+0	1.80E-3	9.24E-2	2.55E-4	-2.43E+0	4.72E-2
PENRE	MJ	1.76E+1	3.46E-1	3.03E-1	1.83E+1	1.33E-1	1.38E+0	7.41E-3	-9.56E+0	1.02E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.76E+1	3.46E-1	3.03E-1	1.83E+1	1.33E-1	1.38E+0	7.41E-3	-9.56E+0	1.02E+1
PET	MJ	1.98E+1	3.51E-1	4.78E-1	2.07E+1	1.35E-1	1.47E+0	7.66E-3	-1.20E+1	1.03E+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	1.23E-2	3.69E-5	1.40E-2	2.63E-2	1.42E-5	1.38E-3	8.52E-6	-6.49E-3	2.12E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.17E-4	8.33E-7	4.37E-7	1.18E-4	3.20E-7	2.14E-6	8.53E-9	-7.92E-6	1.13E-4
NHWD	kg	7.49E-2	2.02E-2	3.20E-3	9.83E-2	7.76E-3	4.84E-2	3.10E-2	-3.23E-2	1.53E-1
RWD	kg	3.32E-5	2.22E-6	8.84E-7	3.63E-5	8.52E-7	4.96E-6	4.54E-8	-1.66E-5	2.55E-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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