Environmental Profile

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

Ecochain v3.5.80

Product:	3025890 - PVC Elbow 87°3 GY 63 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	2.27E-1	7.64E-3	1.26E-2	2.47E-1	3.14E-3	1.52E-1	9.66E-4	-1.28E-1	2.76E-1
GWP-f	kg CO2 eq	2.70E-1	7.63E-3	9.52E-3	2.87E-1	3.13E-3	9.46E-2	9.65E-4	-1.53E-1	2.33E-1
GWP-b	kg CO2 eq	-4.34E-2	4.63E-6	3.04E-3	-4.03E-2	1.90E-6	5.74E-2	1.22E-6	2.60E-2	4.31E-2
GWP-luluc	kg CO2 eq	3.86E-4	2.70E-6	1.37E-5	4.03E-4	1.11E-6	3.93E-5	2.58E-8	-2.93E-4	1.50E-4
ODP	kg CFC11 eq	1.33E-7	1.76E-9	1.28E-9	1.36E-7	7.22E-10	1.09E-8	3.67E-11	-6.82E-8	7.99E-8
AP	mol H+ eq	1.31E-3	4.35E-5	7.30E-5	1.43E-3	1.78E-5	1.93E-4	8.90E-7	-6.59E-4	9.82E-4
EP-fw	kg P eq	1.32E-5	6.28E-8	2.34E-7	1.35E-5	2.58E-8	1.31E-6	1.16E-9	-7.40E-6	7.40E-6
EP-m	kg N eq	2.52E-4	1.56E-5	2.01E-5	2.87E-4	6.38E-6	4.86E-5	5.46E-7	-1.26E-4	2.17E-4
EP-T	mol N eq	2.70E-3	1.71E-4	2.65E-4	3.13E-3	7.04E-5	5.35E-4	3.55E-6	-1.38E-3	2.37E-3
POCP	kg NMVOC eq	8.54E-4	4.90E-5	5.94E-5	9.63E-4	2.01E-5	1.60E-4	1.22E-6	-4.46E-4	6.98E-4
ADP-mm	kg Sb eq	2.47E-4	1.97E-7	2.97E-7	2.48E-4	8.10E-8	7.61E-7	8.93E-10	-2.93E-6	2.46E-4
ADP-f	MJ	6.57E+0	1.17E-1	1.30E-1	6.81E+0	4.81E-2	5.13E-1	2.68E-3	-3.55E+0	3.82E+0
WDP	m3 depriv.	4.06E-1	3.59E-4	2.28E-1	6.35E-1	1.48E-4	1.95E-2	1.79E-5	-2.27E-1	4.27E-1
PM	disease inc.	1.05E-8	6.89E-10	1.00E-9	1.21E-8	2.83E-10	2.42E-9	1.84E-11	-6.46E-9	8.41E-9
IR	kBq U-235 eq	1.52E-2	5.12E-4	3.38E-4	1.60E-2	2.10E-4	1.83E-3	1.23E-5	-8.00E-3	1.01E-2
ETP-fw	CTUe	9.61E+0	9.51E-2	1.74E-1	9.88E+0	3.90E-2	3.81E+0	4.16E-2	-4.01E+0	9.75E+0
HTP-c	CTUh	2.32E-10	3.38E-12	1.12E-11	2.47E-10	1.39E-12	5.92E-11	7.36E-14	-1.01E-10	2.07E-10
HTP-nc	CTUh	7.05E-9	1.13E-10	3.23E-10	7.49E-9	4.65E-11	1.36E-9	7.99E-12	-3.04E-9	5.86E-9
SQP	Pt	5.75E+0	1.00E-1	1.26E+0	7.11E+0	4.11E-2	3.16E-1	6.83E-3	-8.36E+0	-8.91E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.08E+0	1.68E-3	3.20E-1	1.41E+0	6.90E-4	3.61E-2	9.83E-5	-1.49E+0	-4.77E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.08E+0	1.68E-3	3.20E-1	1.41E+0	6.90E-4	3.61E-2	9.83E-5	-1.49E+0	-4.77E-2
PENRE	MJ	7.04E+0	1.24E-1	1.40E-1	7.31E+0	5.10E-2	5.46E-1	2.84E-3	-3.82E+0	4.08E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.04E+0	1.24E-1	1.40E-1	7.31E+0	5.10E-2	5.46E-1	2.84E-3	-3.82E+0	4.08E+0
PET	MJ	8.13E+0	1.26E-1	4.60E-1	8.71E+0	5.17E-2	5.82E-1	2.94E-3	-5.31E+0	4.03E+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	4.81E-3	1.33E-5	5.36E-3	1.02E-2	5.44E-6	5.39E-4	3.27E-6	-3.01E-3	7.72E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.60E-5	3.00E-7	1.67E-7	3.65E-5	1.23E-7	8.59E-7	3.26E-9	-3.27E-6	3.42E-5
NHWD	kg	3.11E-2	7.26E-3	1.23E-3	3.95E-2	2.98E-3	1.92E-2	1.19E-2	-1.39E-2	5.97E-2
RWD	kg	1.36E-5	7.97E-7	3.37E-7	1.48E-5	3.27E-7	2.00E-6	1.74E-8	-7.26E-6	9.85E-6
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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