

# Environmental Profile

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

Ecochain v3.5.80



Product: 4005988 - PVC Eccent Reducer GY 110x100  
 Unit: 1 Piece  
 Manufacturer: Wavin - FR - Varennes

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



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.

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	☑	☑	☑	☑									

## 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	3.36E-1	1.30E-2	1.70E-2	3.66E-1	4.82E-3	2.20E-1	1.50E-3	-1.89E-1	4.04E-1
GWP-f	kg CO2 eq	4.00E-1	1.29E-2	1.32E-2	4.27E-1	4.82E-3	1.33E-1	1.50E-3	-2.27E-1	3.39E-1
GWP-b	kg CO2 eq	-6.45E-2	7.86E-6	3.80E-3	-6.07E-2	2.93E-6	8.61E-2	1.87E-6	3.89E-2	6.44E-2
GWP-luluc	kg CO2 eq	5.90E-4	4.58E-6	1.50E-5	6.10E-4	1.70E-6	5.98E-5	4.04E-8	-4.42E-4	2.29E-4
ODP	kg CFC11 eq	2.02E-7	2.98E-9	1.74E-9	2.06E-7	1.11E-9	1.65E-8	5.65E-11	-1.04E-7	1.20E-7
AP	mol H+ eq	1.99E-3	7.37E-5	8.47E-5	2.15E-3	2.74E-5	2.92E-4	1.37E-6	-1.00E-3	1.46E-3
EP-fw	kg P eq	2.01E-5	1.07E-7	3.19E-7	2.05E-5	3.96E-8	2.00E-6	1.81E-9	-1.13E-5	1.13E-5
EP-m	kg N eq	3.81E-4	2.64E-5	2.41E-5	4.31E-4	9.82E-6	7.33E-5	8.35E-7	-1.90E-4	3.25E-4
EP-T	mol N eq	4.10E-3	2.91E-4	3.02E-4	4.70E-3	1.08E-4	8.07E-4	5.47E-6	-2.08E-3	3.54E-3
POCP	kg NMVOC eq	1.27E-3	8.31E-5	7.14E-5	1.42E-3	3.09E-5	2.42E-4	1.88E-6	-6.74E-4	1.02E-3
ADP-mm	kg Sb eq	4.91E-4	3.35E-7	3.16E-7	4.92E-4	1.25E-7	1.16E-6	1.38E-9	-4.50E-6	4.89E-4
ADP-f	MJ	9.60E+0	1.99E-1	1.82E-1	9.99E+0	7.39E-2	7.82E-1	4.12E-3	-5.32E+0	5.53E+0
WDP	m3 depriv.	6.11E-1	6.10E-4	3.50E-1	9.62E-1	2.27E-4	2.96E-2	3.02E-5	-3.48E-1	6.45E-1
PM	disease inc.	1.55E-8	1.17E-9	1.20E-9	1.79E-8	4.35E-10	3.67E-9	2.83E-11	-9.78E-9	1.22E-8
IR	kBq U-235 eq	2.30E-2	8.69E-4	5.06E-4	2.43E-2	3.23E-4	2.78E-3	1.89E-5	-1.22E-2	1.53E-2
ETP-fw	CTUe	1.55E+1	1.61E-1	2.00E-1	1.58E+1	6.00E-2	5.76E+0	6.30E-2	-6.08E+0	1.56E+1
HTP-c	CTUh	3.75E-10	5.74E-12	1.42E-11	3.95E-10	2.14E-12	9.06E-11	1.15E-13	-1.53E-10	3.34E-10
HTP-nc	CTUh	1.14E-8	1.92E-10	3.86E-10	1.20E-8	7.16E-11	2.06E-9	1.21E-11	-4.65E-9	9.45E-9
SQP	Pt	8.62E+0	1.70E-1	1.21E+0	1.00E+1	6.33E-2	4.82E-1	1.05E-2	-1.26E+1	-2.00E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.63E+0	2.85E-3	3.07E-1	1.94E+0	1.06E-3	5.49E-2	1.50E-4	-2.24E+0	-2.48E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.63E+0	2.85E-3	3.07E-1	1.94E+0	1.06E-3	5.49E-2	1.50E-4	-2.24E+0	-2.48E-1
PENRE	MJ	1.03E+1	2.11E-1	1.97E-1	1.07E+1	7.85E-2	8.32E-1	4.37E-3	-5.72E+0	5.91E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.03E+1	2.11E-1	1.97E-1	1.07E+1	7.85E-2	8.32E-1	4.37E-3	-5.72E+0	5.91E+0
PET	MJ	1.19E+1	2.14E-1	5.04E-1	1.26E+1	7.96E-2	8.87E-1	4.52E-3	-7.96E+0	5.66E+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	7.24E-3	2.25E-5	8.21E-3	1.55E-2	8.37E-6	8.17E-4	5.03E-6	-4.58E-3	1.17E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.93E-5	5.08E-7	2.56E-7	7.01E-5	1.89E-7	1.31E-6	5.04E-9	-4.85E-6	6.67E-5
NHWD	kg	4.71E-2	1.23E-2	1.88E-3	6.13E-2	4.58E-3	2.88E-2	1.83E-2	-2.11E-2	9.19E-2
RWD	kg	2.05E-5	1.35E-6	5.18E-7	2.23E-5	5.03E-7	3.04E-6	2.68E-8	-1.10E-5	1.49E-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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