Environmental Profile

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

Ecochain v3.5.80

Product:	4006006 - PVC Eccent Reducer GY 200x160
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	8.77E-1	3.34E-2	4.13E-2	9.52E-1	1.26E-2	5.44E-1	3.90E-3	-5.00E-1	1.01E+0
GWP-f	kg CO2 eq	1.03E+0	3.34E-2	3.26E-2	1.09E+0	1.26E-2	3.47E-1	3.90E-3	-5.81E-1	8.74E-1
GWP-b	kg CO2 eq	-1.50E-1	2.03E-5	8.65E-3	-1.41E-1	7.64E-6	1.97E-1	4.90E-6	8.10E-2	1.37E-1
GWP-luluc	kg CO2 eq	1.42E-3	1.18E-5	3.01E-5	1.46E-3	4.45E-6	1.56E-4	1.05E-7	-1.00E-3	6.18E-4
ODP	kg CFC11 eq	5.26E-7	7.69E-9	4.24E-9	5.38E-7	2.90E-9	4.32E-8	1.48E-10	-2.70E-7	3.14E-7
AP	mol H+ eq	5.05E-3	1.90E-4	1.81E-4	5.43E-3	7.17E-5	7.54E-4	3.59E-6	-2.51E-3	3.75E-3
EP-fw	kg P eq	5.12E-5	2.74E-7	7.76E-7	5.22E-5	1.04E-7	5.23E-6	4.70E-9	-2.75E-5	3.00E-5
EP-m	kg N eq	9.54E-4	6.80E-5	5.32E-5	1.07E-3	2.56E-5	1.88E-4	2.19E-6	-4.70E-4	8.21E-4
EP-T	mol N eq	1.03E-2	7.49E-4	6.36E-4	1.17E-2	2.83E-4	2.07E-3	1.43E-5	-5.13E-3	8.94E-3
POCP	kg NMVOC eq	3.22E-3	2.14E-4	1.57E-4	3.59E-3	8.08E-5	6.20E-4	4.91E-6	-1.68E-3	2.62E-3
ADP-mm	kg Sb eq	1.28E-3	8.63E-7	6.15E-7	1.28E-3	3.26E-7	2.99E-6	3.60E-9	-1.16E-5	1.27E-3
ADP-f	MJ	2.48E+1	5.12E-1	4.55E-1	2.58E+1	1.93E-1	2.03E+0	1.08E-2	-1.37E+1	1.43E+1
WDP	m3 depriv.	1.60E+0	1.57E-3	9.24E-1	2.52E+0	5.93E-4	7.77E-2	7.57E-5	-8.79E-1	1.72E+0
PM	disease inc.	3.80E-8	3.01E-9	2.64E-9	4.37E-8	1.14E-9	9.46E-9	7.40E-11	-2.33E-8	3.11E-8
IR	kBq U-235 eq	5.87E-2	2.24E-3	1.31E-3	6.23E-2	8.44E-4	7.20E-3	4.93E-5	-3.05E-2	3.99E-2
ETP-fw	CTUe	3.77E+1	4.16E-1	4.23E-1	3.85E+1	1.57E-1	1.51E+1	1.66E-1	-1.43E+1	3.97E+1
HTP-c	CTUh	9.61E-10	1.48E-11	3.30E-11	1.01E-9	5.58E-12	2.32E-10	2.99E-13	-3.82E-10	8.64E-10
HTP-nc	CTUh	2.94E-8	4.96E-10	8.48E-10	3.08E-8	1.87E-10	5.36E-9	3.19E-11	-1.17E-8	2.46E-8
SQP	Pt	2.01E+1	4.38E-1	2.05E+0	2.26E+1	1.65E-1	1.25E+0	2.75E-2	-2.77E+1	-3.74E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.85E+0	7.35E-3	5.22E-1	4.38E+0	2.77E-3	1.43E-1	3.94E-4	-4.98E+0	-4.53E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.85E+0	7.35E-3	5.22E-1	4.38E+0	2.77E-3	1.43E-1	3.94E-4	-4.98E+0	-4.53E-1
PENRE	MJ	2.66E+1	5.44E-1	4.92E-1	2.76E+1	2.05E-1	2.16E+0	1.14E-2	-1.47E+1	1.53E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.66E+1	5.44E-1	4.92E-1	2.76E+1	2.05E-1	2.16E+0	1.14E-2	-1.47E+1	1.53E+1
PET	MJ	3.05E+1	5.51E-1	1.01E+0	3.20E+1	2.08E-1	2.30E+0	1.18E-2	-1.97E+1	1.48E+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	1.87E-2	5.79E-5	2.16E-2	4.04E-2	2.19E-5	2.14E-3	1.32E-5	-1.12E-2	3.14E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.80E-4	1.31E-6	6.76E-7	1.82E-4	4.94E-7	3.36E-6	1.31E-8	-1.23E-5	1.73E-4
NHWD	kg	1.19E-1	3.17E-2	4.95E-3	1.55E-1	1.20E-2	7.43E-2	4.79E-2	-5.29E-2	2.37E-1
RWD	kg	5.18E-5	3.48E-6	1.37E-6	5.66E-5	1.31E-6	7.82E-6	7.00E-8	-2.75E-5	3.83E-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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