Environmental Profile

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

Ecochain v3.5.80

Product:	3025986 - PVC Reducer GY 100x50 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	2.11E-1	7.16E-3	1.15E-2	2.29E-1	2.95E-3	1.46E-1	9.08E-4	-1.21E-1	2.58E-1
GWP-f	kg CO2 eq	2.54E-1	7.15E-3	8.74E-3	2.70E-1	2.95E-3	8.93E-2	9.08E-4	-1.44E-1	2.19E-1
GWP-b	kg CO2 eq	-4.35E-2	4.34E-6	2.73E-3	-4.08E-2	1.79E-6	5.62E-2	1.14E-6	2.33E-2	3.88E-2
GWP-luluc	kg CO2 eq	3.61E-4	2.53E-6	1.20E-5	3.75E-4	1.04E-6	3.68E-5	2.43E-8	-2.69E-4	1.44E-4
ODP	kg CFC11 eq	1.25E-7	1.65E-9	1.17E-9	1.28E-7	6.79E-10	1.02E-8	3.45E-11	-6.41E-8	7.47E-8
AP	mol H+ eq	1.24E-3	4.07E-5	6.46E-5	1.34E-3	1.68E-5	1.80E-4	8.38E-7	-6.17E-4	9.25E-4
EP-fw	kg P eq	1.24E-5	5.89E-8	2.14E-7	1.26E-5	2.43E-8	1.23E-6	1.09E-9	-6.87E-6	7.03E-6
EP-m	kg N eq	2.37E-4	1.46E-5	1.79E-5	2.69E-4	6.01E-6	4.55E-5	5.12E-7	-1.18E-4	2.04E-4
EP-T	mol N eq	2.54E-3	1.61E-4	2.34E-4	2.94E-3	6.62E-5	5.02E-4	3.34E-6	-1.29E-3	2.22E-3
POCP	kg NMVOC eq	8.06E-4	4.59E-5	5.29E-5	9.05E-4	1.89E-5	1.50E-4	1.15E-6	-4.19E-4	6.57E-4
ADP-mm	kg Sb eq	2.47E-4	1.85E-7	2.59E-7	2.47E-4	7.63E-8	7.12E-7	8.41E-10	-2.75E-6	2.45E-4
ADP-f	MJ	6.17E+0	1.10E-1	1.19E-1	6.40E+0	4.53E-2	4.82E-1	2.52E-3	-3.34E+0	3.59E+0
WDP	m3 depriv.	3.81E-1	3.37E-4	2.15E-1	5.96E-1	1.39E-4	1.83E-2	1.72E-5	-2.12E-1	4.02E-1
PM	disease inc.	9.85E-9	6.46E-10	8.93E-10	1.14E-8	2.66E-10	2.27E-9	1.73E-11	-6.02E-9	7.92E-9
IR	kBq U-235 eq	1.43E-2	4.80E-4	3.16E-4	1.51E-2	1.98E-4	1.71E-3	1.15E-5	-7.46E-3	9.54E-3
ETP-fw	CTUe	9.04E+0	8.92E-2	1.54E-1	9.28E+0	3.67E-2	3.56E+0	3.89E-2	-3.70E+0	9.22E+0
HTP-c	CTUh	2.22E-10	3.17E-12	1.01E-11	2.35E-10	1.31E-12	5.58E-11	6.94E-14	-9.50E-11	1.97E-10
HTP-nc	CTUh	6.71E-9	1.06E-10	2.88E-10	7.10E-9	4.38E-11	1.27E-9	7.48E-12	-2.85E-9	5.58E-9
SQP	Pt	5.59E+0	9.39E-2	1.08E+0	6.77E+0	3.87E-2	2.97E-1	6.42E-3	-7.86E+0	-7.53E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.04E+0	1.58E-3	2.74E-1	1.32E+0	6.49E-4	3.38E-2	9.22E-5	-1.39E+0	-4.06E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.04E+0	1.58E-3	2.74E-1	1.32E+0	6.49E-4	3.38E-2	9.22E-5	-1.39E+0	-4.06E-2
PENRE	MJ	6.62E+0	1.17E-1	1.29E-1	6.86E+0	4.80E-2	5.12E-1	2.67E-3	-3.59E+0	3.83E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.62E+0	1.17E-1	1.29E-1	6.86E+0	4.80E-2	5.12E-1	2.67E-3	-3.59E+0	3.83E+0
PET	MJ	7.66E+0	1.18E-1	4.03E-1	8.18E+0	4.87E-2	5.46E-1	2.76E-3	-4.99E+0	3.79E+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	4.53E-3	1.24E-5	5.03E-3	9.57E-3	5.12E-6	5.05E-4	3.08E-6	-2.79E-3	7.29E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.57E-5	2.81E-7	1.57E-7	3.61E-5	1.16E-7	8.05E-7	3.07E-9	-3.07E-6	3.39E-5
NHWD	kg	2.92E-2	6.81E-3	1.15E-3	3.72E-2	2.80E-3	1.80E-2	1.12E-2	-1.30E-2	5.62E-2
RWD	kg	1.28E-5	7.47E-7	3.17E-7	1.39E-5	3.08E-7	1.87E-6	1.64E-8	-6.78E-6	9.33E-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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