Environmental Profile

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

Ecochain v3.5.80

Product:	3025984 - PVC Reducer GY 100x80 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	2.19E-1	7.39E-3	1.06E-2	2.37E-1	3.06E-3	1.48E-1	9.41E-4	-1.25E-1	2.64E-1
GWP-f	kg CO2 eq	2.62E-1	7.39E-3	8.26E-3	2.78E-1	3.05E-3	9.22E-2	9.41E-4	-1.49E-1	2.25E-1
GWP-b	kg CO2 eq	-4.35E-2	4.49E-6	2.35E-3	-4.11E-2	1.85E-6	5.62E-2	1.19E-6	2.33E-2	3.84E-2
GWP-luluc	kg CO2 eq	3.67E-4	2.61E-6	9.10E-6	3.79E-4	1.08E-6	3.82E-5	2.52E-8	-2.72E-4	1.46E-4
ODP	kg CFC11 eq	1.30E-7	1.70E-9	1.09E-9	1.32E-7	7.04E-10	1.06E-8	3.58E-11	-6.63E-8	7.74E-8
AP	mol H+ eq	1.27E-3	4.21E-5	5.18E-5	1.37E-3	1.74E-5	1.87E-4	8.68E-7	-6.34E-4	9.39E-4
EP-fw	kg P eq	1.27E-5	6.08E-8	1.99E-7	1.30E-5	2.51E-8	1.28E-6	1.13E-9	-7.04E-6	7.25E-6
EP-m	kg N eq	2.43E-4	1.51E-5	1.48E-5	2.73E-4	6.22E-6	4.70E-5	5.31E-7	-1.21E-4	2.06E-4
EP-T	mol N eq	2.61E-3	1.66E-4	1.85E-4	2.96E-3	6.86E-5	5.18E-4	3.46E-6	-1.32E-3	2.23E-3
POCP	kg NMVOC eq	8.29E-4	4.74E-5	4.39E-5	9.20E-4	1.96E-5	1.55E-4	1.19E-6	-4.30E-4	6.66E-4
ADP-mm	kg Sb eq	2.47E-4	1.91E-7	1.91E-7	2.48E-4	7.90E-8	7.37E-7	8.70E-10	-2.85E-6	2.45E-4
ADP-f	MJ	6.38E+0	1.13E-1	1.14E-1	6.61E+0	4.69E-2	4.98E-1	2.61E-3	-3.45E+0	3.71E+0
WDP	m3 depriv.	3.95E-1	3.48E-4	2.22E-1	6.17E-1	1.44E-4	1.90E-2	1.76E-5	-2.19E-1	4.18E-1
PM	disease inc.	1.01E-8	6.67E-10	7.38E-10	1.15E-8	2.76E-10	2.34E-9	1.79E-11	-6.13E-9	7.99E-9
IR	kBq U-235 eq	1.47E-2	4.96E-4	3.19E-4	1.55E-2	2.05E-4	1.77E-3	1.20E-5	-7.67E-3	9.85E-3
ETP-fw	CTUe	9.17E+0	9.21E-2	1.22E-1	9.39E+0	3.81E-2	3.70E+0	4.04E-2	-3.76E+0	9.40E+0
HTP-c	CTUh	2.27E-10	3.28E-12	8.82E-12	2.39E-10	1.35E-12	5.75E-11	7.18E-14	-9.74E-11	2.00E-10
HTP-nc	CTUh	6.88E-9	1.10E-10	2.37E-10	7.23E-9	4.54E-11	1.32E-9	7.77E-12	-2.93E-9	5.68E-9
SQP	Pt	5.62E+0	9.70E-2	7.15E-1	6.43E+0	4.01E-2	3.07E-1	6.66E-3	-7.87E+0	-1.09E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.05E+0	1.63E-3	1.82E-1	1.24E+0	6.72E-4	3.51E-2	9.57E-5	-1.40E+0	-1.26E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.05E+0	1.63E-3	1.82E-1	1.24E+0	6.72E-4	3.51E-2	9.57E-5	-1.40E+0	-1.26E-1
PENRE	MJ	6.84E+0	1.20E-1	1.24E-1	7.08E+0	4.98E-2	5.30E-1	2.77E-3	-3.71E+0	3.96E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.84E+0	1.20E-1	1.24E-1	7.08E+0	4.98E-2	5.30E-1	2.77E-3	-3.71E+0	3.96E+0
PET	MJ	7.89E+0	1.22E-1	3.06E-1	8.32E+0	5.04E-2	5.65E-1	2.86E-3	-5.11E+0	3.83E+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	4.67E-3	1.28E-5	5.20E-3	9.89E-3	5.30E-6	5.24E-4	3.19E-6	-2.86E-3	7.56E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.58E-5	2.90E-7	1.62E-7	3.63E-5	1.20E-7	8.32E-7	3.18E-9	-3.16E-6	3.41E-5
NHWD	kg	3.00E-2	7.03E-3	1.19E-3	3.82E-2	2.91E-3	1.86E-2	1.16E-2	-1.34E-2	5.80E-2
RWD	kg	1.32E-5	7.71E-7	3.28E-7	1.43E-5	3.19E-7	1.93E-6	1.70E-8	-6.96E-6	9.64E-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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