Environmental Profile

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

Ecochain v3.5.80

Product:	3025985 - PVC Reducer GY 100x75 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	2.10E-1	7.33E-3	1.21E-2	2.29E-1	3.06E-3	1.41E-1	9.41E-4	-1.20E-1	2.53E-1
GWP-f	kg CO2 eq	2.52E-1	7.33E-3	9.15E-3	2.69E-1	3.05E-3	8.44E-2	9.41E-4	-1.44E-1	2.14E-1
GWP-b	kg CO2 eq	-4.32E-2	4.45E-6	2.89E-3	-4.03E-2	1.85E-6	5.62E-2	1.19E-6	2.33E-2	3.92E-2
GWP-luluc	kg CO2 eq	3.60E-4	2.59E-6	1.29E-5	3.75E-4	1.08E-6	3.81E-5	2.52E-8	-2.72E-4	1.43E-4
ODP	kg CFC11 eq	1.29E-7	1.69E-9	1.23E-9	1.32E-7	7.04E-10	1.06E-8	3.58E-11	-6.58E-8	7.78E-8
AP	mol H+ eq	1.23E-3	4.17E-5	6.88E-5	1.34E-3	1.74E-5	1.85E-4	8.68E-7	-6.30E-4	9.17E-4
EP-fw	kg P eq	1.24E-5	6.03E-8	2.25E-7	1.27E-5	2.51E-8	1.28E-6	1.13E-9	-7.03E-6	6.99E-6
EP-m	kg N eq	2.35E-4	1.49E-5	1.90E-5	2.69E-4	6.22E-6	4.65E-5	5.31E-7	-1.19E-4	2.03E-4
EP-T	mol N eq	2.52E-3	1.65E-4	2.49E-4	2.94E-3	6.86E-5	5.12E-4	3.46E-6	-1.31E-3	2.21E-3
POCP	kg NMVOC eq	7.91E-4	4.71E-5	5.62E-5	8.94E-4	1.96E-5	1.53E-4	1.19E-6	-4.25E-4	6.44E-4
ADP-mm	kg Sb eq	2.47E-4	1.90E-7	2.78E-7	2.48E-4	7.90E-8	7.35E-7	8.70E-10	-2.84E-6	2.45E-4
ADP-f	MJ	6.13E+0	1.12E-1	1.25E-1	6.36E+0	4.69E-2	4.97E-1	2.61E-3	-3.36E+0	3.55E+0
WDP	m3 depriv.	3.88E-1	3.45E-4	2.22E-1	6.11E-1	1.44E-4	1.89E-2	1.76E-5	-2.18E-1	4.12E-1
PM	disease inc.	9.74E-9	6.62E-10	9.48E-10	1.13E-8	2.76E-10	2.33E-9	1.79E-11	-6.11E-9	7.86E-9
IR	kBq U-235 eq	1.45E-2	4.92E-4	3.28E-4	1.53E-2	2.05E-4	1.77E-3	1.20E-5	-7.64E-3	9.63E-3
ETP-fw	CTUe	9.05E+0	9.13E-2	1.64E-1	9.31E+0	3.81E-2	3.70E+0	4.04E-2	-3.76E+0	9.33E+0
HTP-c	CTUh	2.24E-10	3.25E-12	1.07E-11	2.38E-10	1.35E-12	5.65E-11	7.18E-14	-9.70E-11	1.99E-10
HTP-nc	CTUh	6.81E-9	1.09E-10	3.06E-10	7.22E-9	4.54E-11	1.31E-9	7.77E-12	-2.92E-9	5.66E-9
SQP	Pt	5.58E+0	9.62E-2	1.17E+0	6.84E+0	4.01E-2	3.05E-1	6.66E-3	-7.87E+0	-6.73E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.04E+0	1.61E-3	2.96E-1	1.34E+0	6.72E-4	3.50E-2	9.57E-5	-1.40E+0	-2.15E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.04E+0	1.61E-3	2.96E-1	1.34E+0	6.72E-4	3.50E-2	9.57E-5	-1.40E+0	-2.15E-2
PENRE	MJ	6.57E+0	1.19E-1	1.35E-1	6.82E+0	4.98E-2	5.29E-1	2.77E-3	-3.61E+0	3.79E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.57E+0	1.19E-1	1.35E-1	6.82E+0	4.98E-2	5.29E-1	2.77E-3	-3.61E+0	3.79E+0
PET	MJ	7.61E+0	1.21E-1	4.31E-1	8.17E+0	5.04E-2	5.64E-1	2.86E-3	-5.01E+0	3.77E+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	4.51E-3	1.27E-5	5.22E-3	9.74E-3	5.30E-6	5.22E-4	3.19E-6	-2.85E-3	7.42E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.58E-5	2.88E-7	1.62E-7	3.62E-5	1.20E-7	8.27E-7	3.18E-9	-3.07E-6	3.41E-5
NHWD	kg	2.93E-2	6.97E-3	1.19E-3	3.75E-2	2.91E-3	1.82E-2	1.16E-2	-1.34E-2	5.68E-2
RWD	kg	1.30E-5	7.65E-7	3.28E-7	1.41E-5	3.19E-7	1.93E-6	1.70E-8	-6.93E-6	9.45E-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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