Environmental Profile

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

Ecochain v3.5.80

Product:	3025988 - PVC Reducer GY 100x40 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	2.01E-1	6.87E-3	9.07E-3	2.17E-1	2.82E-3	1.42E-1	8.67E-4	-1.15E-1	2.47E-1
GWP-f	kg CO2 eq	2.44E-1	6.86E-3	7.16E-3	2.58E-1	2.82E-3	8.57E-2	8.67E-4	-1.38E-1	2.09E-1
GWP-b	kg CO2 eq	-4.36E-2	4.17E-6	1.91E-3	-4.17E-2	1.71E-6	5.63E-2	1.09E-6	2.34E-2	3.79E-2
GWP-luluc	kg CO2 eq	3.53E-4	2.43E-6	6.69E-6	3.62E-4	9.97E-7	3.51E-5	2.33E-8	-2.65E-4	1.33E-4
ODP	kg CFC11 eq	1.19E-7	1.58E-9	9.32E-10	1.22E-7	6.49E-10	9.74E-9	3.30E-11	-6.12E-8	7.08E-8
AP	mol H+ eq	1.19E-3	3.91E-5	4.00E-5	1.27E-3	1.60E-5	1.73E-4	8.00E-7	-5.96E-4	8.67E-4
EP-fw	kg P eq	1.19E-5	5.64E-8	1.71E-7	1.22E-5	2.32E-8	1.18E-6	1.05E-9	-6.67E-6	6.69E-6
EP-m	kg N eq	2.29E-4	1.40E-5	1.17E-5	2.55E-4	5.74E-6	4.37E-5	4.88E-7	-1.14E-4	1.91E-4
EP-T	mol N eq	2.46E-3	1.54E-4	1.41E-4	2.76E-3	6.33E-5	4.81E-4	3.19E-6	-1.25E-3	2.05E-3
POCP	kg NMVOC eq	7.79E-4	4.40E-5	3.48E-5	8.58E-4	1.81E-5	1.44E-4	1.09E-6	-4.05E-4	6.16E-4
ADP-mm	kg Sb eq	2.47E-4	1.77E-7	1.37E-7	2.47E-4	7.29E-8	6.82E-7	8.03E-10	-2.64E-6	2.45E-4
ADP-f	MJ	5.91E+0	1.05E-1	1.00E-1	6.12E+0	4.32E-2	4.61E-1	2.40E-3	-3.20E+0	3.42E+0
WDP	m3 depriv.	3.64E-1	3.23E-4	2.02E-1	5.66E-1	1.33E-4	1.74E-2	1.67E-5	-2.04E-1	3.80E-1
PM	disease inc.	9.56E-9	6.19E-10	5.84E-10	1.08E-8	2.54E-10	2.17E-9	1.65E-11	-5.88E-9	7.32E-9
IR	kBq U-235 eq	1.37E-2	4.60E-4	2.87E-4	1.45E-2	1.89E-4	1.64E-3	1.10E-5	-7.20E-3	9.12E-3
ETP-fw	CTUe	8.87E+0	8.55E-2	9.36E-2	9.05E+0	3.51E-2	3.39E+0	3.70E-2	-3.62E+0	8.89E+0
HTP-c	CTUh	2.15E-10	3.04E-12	7.26E-12	2.25E-10	1.25E-12	5.36E-11	6.64E-14	-9.20E-11	1.88E-10
HTP-nc	CTUh	6.49E-9	1.02E-10	1.87E-10	6.77E-9	4.19E-11	1.21E-9	7.12E-12	-2.74E-9	5.30E-9
SQP	Pt	5.56E+0	9.01E-2	4.59E-1	6.11E+0	3.70E-2	2.84E-1	6.13E-3	-7.85E+0	-1.41E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.03E+0	1.51E-3	1.17E-1	1.15E+0	6.20E-4	3.23E-2	8.78E-5	-1.39E+0	-2.06E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.03E+0	1.51E-3	1.17E-1	1.15E+0	6.20E-4	3.23E-2	8.78E-5	-1.39E+0	-2.06E-1
PENRE	MJ	6.34E+0	1.12E-1	1.08E-1	6.56E+0	4.59E-2	4.90E-1	2.55E-3	-3.45E+0	3.65E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.34E+0	1.12E-1	1.08E-1	6.56E+0	4.59E-2	4.90E-1	2.55E-3	-3.45E+0	3.65E+0
PET	MJ	7.37E+0	1.13E-1	2.25E-1	7.71E+0	4.65E-2	5.22E-1	2.64E-3	-4.84E+0	3.45E+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	4.35E-3	1.19E-5	4.74E-3	9.10E-3	4.89E-6	4.82E-4	2.94E-6	-2.71E-3	6.88E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.55E-5	2.69E-7	1.48E-7	3.59E-5	1.11E-7	7.71E-7	2.93E-9	-2.96E-6	3.38E-5
NHWD	kg	2.82E-2	6.53E-3	1.08E-3	3.58E-2	2.68E-3	1.73E-2	1.07E-2	-1.26E-2	5.39E-2
RWD	kg	1.24E-5	7.16E-7	2.99E-7	1.34E-5	2.94E-7	1.79E-6	1.56E-8	-6.55E-6	8.93E-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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