Environmental Profile

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

Ecochain v3.5.80

Product:	3025990 - PVC Reducer GY 50x40 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	6.87E-2	2.40E-3	3.54E-3	7.46E-2	8.69E-4	6.15E-2	2.74E-4	-3.36E-2	1.04E-1
GWP-f	kg CO2 eq	9.06E-2	2.40E-3	2.65E-3	9.57E-2	8.69E-4	3.04E-2	2.74E-4	-5.20E-2	7.52E-2
GWP-b	kg CO2 eq	-2.21E-2	1.46E-6	8.84E-4	-2.12E-2	5.27E-7	3.11E-2	3.36E-7	1.86E-2	2.84E-2
GWP-luluc	kg CO2 eq	1.81E-4	8.50E-7	4.18E-6	1.86E-4	3.07E-7	1.10E-5	7.53E-9	-1.65E-4	3.24E-5
ODP	kg CFC11 eq	3.82E-8	5.53E-10	3.60E-10	3.91E-8	2.00E-10	3.11E-9	1.02E-11	-2.01E-8	2.23E-8
AP	mol H+ eq	4.58E-4	1.37E-5	2.18E-5	4.94E-4	4.95E-6	5.88E-5	2.49E-7	-2.47E-4	3.10E-4
EP-fw	kg P eq	4.58E-6	1.98E-8	6.58E-8	4.67E-6	7.15E-9	3.69E-7	3.34E-10	-3.11E-6	1.94E-6
EP-m	kg N eq	9.67E-5	4.89E-6	5.91E-6	1.07E-4	1.77E-6	1.57E-5	1.49E-7	-5.02E-5	7.49E-5
EP-T	mol N eq	1.02E-3	5.39E-5	7.93E-5	1.15E-3	1.95E-5	1.73E-4	9.91E-7	-5.59E-4	7.87E-4
POCP	kg NMVOC eq	3.08E-4	1.54E-5	1.75E-5	3.41E-4	5.58E-6	5.17E-5	3.41E-7	-1.71E-4	2.27E-4
ADP-mm	kg Sb eq	9.82E-5	6.21E-8	9.12E-8	9.84E-5	2.25E-8	2.33E-7	2.53E-10	-9.15E-7	9.77E-5
ADP-f	MJ	2.11E+0	3.69E-2	3.58E-2	2.18E+0	1.33E-2	1.52E-1	7.46E-4	-1.15E+0	1.20E+0
WDP	m3 depriv.	1.17E-1	1.13E-4	6.06E-2	1.78E-1	4.09E-5	5.36E-3	6.26E-6	-8.00E-2	1.03E-1
PM	disease inc.	4.30E-9	2.17E-10	2.96E-10	4.82E-9	7.84E-11	7.56E-10	5.13E-12	-3.05E-9	2.61E-9
IR	kBq U-235 eq	5.10E-3	1.61E-4	9.08E-5	5.36E-3	5.83E-5	5.50E-4	3.40E-6	-3.00E-3	2.97E-3
ETP-fw	CTUe	4.43E+0	2.99E-2	5.22E-2	4.51E+0	1.08E-2	1.04E+0	1.11E-2	-2.02E+0	3.56E+0
HTP-c	CTUh	8.08E-11	1.07E-12	3.23E-12	8.51E-11	3.85E-13	1.92E-11	2.14E-14	-3.84E-11	6.63E-11
HTP-nc	CTUh	2.33E-9	3.57E-11	9.54E-11	2.46E-9	1.29E-11	3.92E-10	2.15E-12	-1.10E-9	1.77E-9
SQP	Pt	2.92E+0	3.15E-2	3.99E-1	3.36E+0	1.14E-2	9.39E-2	1.90E-3	-5.07E+0	-1.61E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.23E-1	5.29E-4	1.01E-1	6.24E-1	1.91E-4	1.01E-2	2.67E-5	-8.90E-1	-2.55E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.23E-1	5.29E-4	1.01E-1	6.24E-1	1.91E-4	1.01E-2	2.67E-5	-8.90E-1	-2.55E-1
PENRE	MJ	2.26E+0	3.91E-2	3.86E-2	2.34E+0	1.42E-2	1.62E-1	7.92E-4	-1.23E+0	1.28E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.26E+0	3.91E-2	3.86E-2	2.34E+0	1.42E-2	1.62E-1	7.92E-4	-1.23E+0	1.28E+0
PET	MJ	2.79E+0	3.97E-2	1.40E-1	2.96E+0	1.43E-2	1.72E-1	8.18E-4	-2.12E+0	1.03E+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	1.55E-3	4.17E-6	1.42E-3	2.98E-3	1.51E-6	1.51E-4	9.06E-7	-1.28E-3	1.86E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.40E-5	9.43E-8	4.41E-8	1.41E-5	3.41E-8	2.67E-7	9.20E-10	-1.14E-6	1.33E-5
NHWD	kg	1.14E-2	2.28E-3	3.25E-4	1.40E-2	8.26E-4	5.94E-3	3.30E-3	-5.16E-3	1.89E-2
RWD	kg	4.83E-6	2.51E-7	8.93E-8	5.17E-6	9.07E-8	6.21E-7	4.84E-9	-2.78E-6	3.11E-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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