Environmental Profile

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

Ecochain v3.5.80

Product:	3025933 - PVC Reducer GY 63x50 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.30E-2	3.11E-3	8.14E-3	1.04E-1	1.24E-3	7.10E-2	3.80E-4	-5.23E-2	1.25E-1
GWP-f	kg CO2 eq	1.15E-1	3.11E-3	5.71E-3	1.24E-1	1.24E-3	4.22E-2	3.80E-4	-6.53E-2	1.02E-1
GWP-b	kg CO2 eq	-2.21E-2	1.89E-6	2.43E-3	-1.96E-2	7.51E-7	2.87E-2	4.76E-7	1.31E-2	2.22E-2
GWP-luluc	kg CO2 eq	1.74E-4	1.10E-6	1.40E-5	1.89E-4	4.38E-7	1.54E-5	1.03E-8	-1.37E-4	6.77E-5
ODP	kg CFC11 eq	5.28E-8	7.17E-10	8.22E-10	5.44E-8	2.85E-10	4.29E-9	1.45E-11	-2.73E-8	3.17E-8
AP	mol H+ eq	5.62E-4	1.77E-5	6.74E-5	6.47E-4	7.05E-6	7.76E-5	3.51E-7	-2.79E-4	4.53E-4
EP-fw	kg P eq	5.51E-6	2.56E-8	1.50E-7	5.68E-6	1.02E-8	5.17E-7	4.61E-10	-3.19E-6	3.03E-6
EP-m	kg N eq	1.10E-4	6.34E-6	1.73E-5	1.33E-4	2.52E-6	2.00E-5	2.13E-7	-5.43E-5	1.02E-4
EP-T	mol N eq	1.17E-3	6.99E-5	2.51E-4	1.49E-3	2.78E-5	2.20E-4	1.40E-6	-5.98E-4	1.14E-3
POCP	kg NMVOC eq	3.74E-4	2.00E-5	5.12E-5	4.45E-4	7.94E-6	6.57E-5	4.80E-7	-1.92E-4	3.28E-4
ADP-mm	kg Sb eq	9.89E-5	8.05E-8	3.15E-7	9.93E-5	3.20E-8	3.05E-7	3.53E-10	-1.18E-6	9.85E-5
ADP-f	MJ	2.79E+0	4.78E-2	7.37E-2	2.91E+0	1.90E-2	2.05E-1	1.05E-3	-1.48E+0	1.66E+0
WDP	m3 depriv.	1.62E-1	1.47E-4	8.90E-2	2.52E-1	5.83E-5	7.61E-3	7.65E-6	-9.35E-2	1.66E-1
PM	disease inc.	4.77E-9	2.81E-10	8.71E-10	5.92E-9	1.12E-10	9.80E-10	7.25E-12	-2.90E-9	4.12E-9
IR	kBq U-235 eq	6.40E-3	2.09E-4	1.50E-4	6.75E-3	8.30E-5	7.32E-4	4.82E-6	-3.36E-3	4.21E-3
ETP-fw	CTUe	4.24E+0	3.88E-2	1.64E-1	4.44E+0	1.54E-2	1.48E+0	1.60E-2	-1.82E+0	4.14E+0
HTP-c	CTUh	9.60E-11	1.38E-12	8.56E-12	1.06E-10	5.49E-13	2.47E-11	2.93E-14	-4.31E-11	8.81E-11
HTP-nc	CTUh	2.86E-9	4.62E-11	2.82E-10	3.19E-9	1.84E-11	5.39E-10	3.09E-12	-1.27E-9	2.48E-9
SQP	Pt	2.81E+0	4.09E-2	1.53E+0	4.38E+0	1.62E-2	1.27E-1	2.69E-3	-4.15E+0	3.76E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.14E-1	6.85E-4	3.87E-1	9.02E-1	2.72E-4	1.42E-2	3.83E-5	-7.31E-1	1.85E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.14E-1	6.85E-4	3.87E-1	9.02E-1	2.72E-4	1.42E-2	3.83E-5	-7.31E-1	1.85E-1
PENRE	MJ	2.99E+0	5.07E-2	7.92E-2	3.12E+0	2.02E-2	2.18E-1	1.12E-3	-1.60E+0	1.77E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.99E+0	5.07E-2	7.92E-2	3.12E+0	2.02E-2	2.18E-1	1.12E-3	-1.60E+0	1.77E+0
PET	MJ	3.51E+0	5.14E-2	4.66E-1	4.03E+0	2.04E-2	2.32E-1	1.16E-3	-2.33E+0	1.95E+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	2.01E-3	5.41E-6	2.10E-3	4.11E-3	2.15E-6	2.12E-4	1.29E-6	-1.30E-3	3.03E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.45E-5	1.22E-7	6.41E-8	1.46E-5	4.86E-8	3.47E-7	1.29E-9	-1.40E-6	1.36E-5
NHWD	kg	1.33E-2	2.96E-3	4.79E-4	1.67E-2	1.18E-3	7.93E-3	4.71E-3	-5.87E-3	2.46E-2
RWD	kg	5.92E-6	3.25E-7	1.30E-7	6.37E-6	1.29E-7	8.06E-7	6.85E-9	-3.07E-6	4.24E-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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