Environmental Profile

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

Ecochain v3.5.80

Product:	3025565 - PVC Shaft Pipe GY 400 L=3 PL
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	1.74E+1	2.09E+0	2.62E+0	2.21E+1	8.70E-1	3.76E+1	2.27E-1	-1.14E+1	4.93E+1
GWP-f	kg CO2 eq	3.25E+1	2.09E+0	2.11E+0	3.67E+1	8.69E-1	2.11E+1	2.27E-1	-1.14E+1	4.75E+1
GWP-b	kg CO2 eq	-1.55E+1	1.27E-3	5.06E-1	-1.50E+1	5.28E-4	1.64E+1	2.91E-4	-5.21E-2	1.40E+0
GWP-luluc	kg CO2 eq	4.40E-1	7.40E-4	1.43E-3	4.42E-1	3.08E-4	9.75E-3	6.28E-6	-7.12E-3	4.45E-1
ODP	kg CFC11 eq	1.38E-5	4.82E-7	2.70E-7	1.46E-5	2.00E-7	2.56E-6	9.63E-9	-3.92E-6	1.34E-5
AP	mol H+ eq	1.71E-1	1.19E-2	9.57E-3	1.93E-1	4.95E-3	4.67E-2	2.28E-4	-3.77E-2	2.07E-1
EP-fw	kg P eq	1.68E-3	1.72E-5	4.94E-5	1.75E-3	7.15E-6	3.22E-4	2.82E-7	-2.94E-4	1.79E-3
EP-m	kg N eq	3.21E-2	4.26E-3	2.97E-3	3.93E-2	1.77E-3	1.17E-2	1.38E-4	-7.84E-3	4.51E-2
EP-T	mol N eq	3.37E-1	4.69E-2	3.29E-2	4.17E-1	1.95E-2	1.29E-1	9.15E-4	-9.55E-2	4.71E-1
POCP	kg NMVOC eq	1.06E-1	1.34E-2	8.79E-3	1.28E-1	5.58E-3	3.88E-2	3.09E-4	-2.76E-2	1.45E-1
ADP-mm	kg Sb eq	1.64E-2	5.41E-5	2.75E-5	1.65E-2	2.25E-5	1.81E-4	2.25E-7	-1.48E-4	1.66E-2
ADP-f	MJ	7.52E+2	3.21E+1	2.98E+1	8.14E+2	1.33E+1	1.28E+2	6.94E-1	-2.46E+2	7.10E+2
WDP	m3 depriv.	4.29E+1	9.84E-2	6.41E+1	1.07E+2	4.09E-2	4.75E+0	3.83E-3	-1.05E+1	1.01E+2
PM	disease inc.	1.94E-6	1.89E-7	1.47E-7	2.27E-6	7.84E-8	5.96E-7	4.74E-9	-3.13E-7	2.64E-6
IR	kBq U-235 eq	2.08E+0	1.40E-1	8.96E-2	2.31E+0	5.83E-2	4.43E-1	3.17E-3	-3.71E-1	2.44E+0
ETP-fw	CTUe	7.70E+2	2.60E+1	2.20E+1	8.18E+2	1.08E+1	8.88E+2	9.69E+0	-1.76E+2	1.55E+3
HTP-c	CTUh	3.03E-8	9.27E-10	1.97E-9	3.32E-8	3.85E-10	1.48E-8	1.75E-11	-4.98E-9	4.35E-8
HTP-nc	CTUh	8.88E-7	3.10E-8	4.69E-8	9.66E-7	1.29E-8	3.27E-7	1.87E-9	-1.60E-7	1.15E-6
SQP	Pt	1.63E+3	2.74E+1	6.32E+1	1.72E+3	1.14E+1	8.18E+1	1.75E+0	-3.36E+2	1.48E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.69E+2	4.60E-1	1.63E+1	2.86E+2	1.91E-1	8.89E+0	2.42E-2	-7.13E+1	2.24E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.69E+2	4.60E-1	1.63E+1	2.86E+2	1.91E-1	8.89E+0	2.42E-2	-7.13E+1	2.24E+2
PENRE	MJ	8.05E+2	3.41E+1	3.23E+1	8.72E+2	1.42E+1	1.36E+2	7.36E-1	-2.67E+2	7.56E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.05E+2	3.41E+1	3.23E+1	8.72E+2	1.42E+1	1.36E+2	7.36E-1	-2.67E+2	7.56E+2
PET	MJ	1.07E+3	3.45E+1	4.86E+1	1.16E+3	1.44E+1	1.45E+2	7.61E-1	-3.38E+2	9.80E+2
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	5.57E-1	3.63E-3	1.50E+0	2.06E+0	1.51E-3	1.31E-1	8.49E-4	-1.17E-1	2.08E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.14E-3	8.20E-5	4.70E-5	2.27E-3	3.41E-5	2.07E-4	8.33E-7	-2.30E-4	2.28E-3
NHWD	kg	4.33E+0	1.99E+0	3.44E-1	6.67E+0	8.27E-1	5.06E+0	3.30E+0	-6.98E-1	1.52E+1
RWD	kg	1.83E-3	2.18E-4	9.50E-5	2.14E-3	9.07E-5	4.83E-4	4.55E-6	-3.43E-4	2.38E-3
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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