Environmental Profile

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

Ecochain v3.5.80

Product:	3026075 - PVC Branch 87°3 GY 100x40 S/S/SP 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	7.29E-1	2.91E-2	3.48E-2	7.93E-1	1.06E-2	5.24E-1	3.28E-3	-4.10E-1	9.21E-1
GWP-f	kg CO2 eq	9.01E-1	2.91E-2	2.75E-2	9.58E-1	1.06E-2	2.94E-1	3.28E-3	-5.14E-1	7.53E-1
GWP-b	kg CO2 eq	-1.74E-1	1.77E-5	7.32E-3	-1.66E-1	6.43E-6	2.30E-1	4.11E-6	1.04E-1	1.68E-1
GWP-luluc	kg CO2 eq	1.42E-3	1.03E-5	2.57E-5	1.46E-3	3.75E-6	1.32E-4	8.82E-8	-1.12E-3	4.74E-4
ODP	kg CFC11 eq	4.47E-7	6.71E-9	3.58E-9	4.57E-7	2.44E-9	3.68E-8	1.24E-10	-2.31E-7	2.66E-7
AP	mol H+ eq	4.48E-3	1.66E-4	1.53E-4	4.80E-3	6.03E-5	6.53E-4	3.01E-6	-2.32E-3	3.19E-3
EP-fw	kg P eq	4.56E-5	2.40E-7	6.54E-7	4.65E-5	8.71E-8	4.43E-6	3.96E-9	-2.66E-5	2.44E-5
EP-m	kg N eq	8.76E-4	5.93E-5	4.51E-5	9.80E-4	2.16E-5	1.65E-4	1.84E-6	-4.46E-4	7.24E-4
EP-T	mol N eq	9.40E-3	6.54E-4	5.40E-4	1.06E-2	2.38E-4	1.82E-3	1.20E-5	-4.90E-3	7.76E-3
POCP	kg NMVOC eq	2.89E-3	1.87E-4	1.33E-4	3.21E-3	6.79E-5	5.45E-4	4.13E-6	-1.57E-3	2.25E-3
ADP-mm	kg Sb eq	1.08E-3	7.53E-7	5.25E-7	1.08E-3	2.74E-7	2.59E-6	3.03E-9	-1.01E-5	1.08E-3
ADP-f	MJ	2.14E+1	4.47E-1	3.84E-1	2.23E+1	1.62E-1	1.74E+0	9.05E-3	-1.19E+1	1.23E+1
WDP	m3 depriv.	1.36E+0	1.37E-3	7.76E-1	2.13E+0	4.98E-4	6.56E-2	6.41E-5	-7.92E-1	1.41E+0
PM	disease inc.	3.58E-8	2.63E-9	2.24E-9	4.06E-8	9.55E-10	8.24E-9	6.22E-11	-2.39E-8	2.60E-8
IR	kBq U-235 eq	5.13E-2	1.95E-3	1.10E-3	5.44E-2	7.10E-4	6.21E-3	4.14E-5	-2.81E-2	3.32E-2
ETP-fw	CTUe	3.64E+1	3.63E-1	3.59E-1	3.71E+1	1.32E-1	1.28E+1	1.39E-1	-1.49E+1	3.53E+1
HTP-c	CTUh	8.47E-10	1.29E-11	2.79E-11	8.88E-10	4.69E-12	2.01E-10	2.51E-13	-3.59E-10	7.35E-10
HTP-nc	CTUh	2.54E-8	4.32E-10	7.19E-10	2.66E-8	1.57E-10	4.57E-9	2.68E-11	-1.07E-8	2.06E-8
SQP	Pt	2.24E+1	3.82E-1	1.76E+0	2.45E+1	1.39E-1	1.07E+0	2.31E-2	-3.32E+1	-7.48E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.13E+0	6.41E-3	4.49E-1	4.58E+0	2.33E-3	1.22E-1	3.31E-4	-5.88E+0	-1.17E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.13E+0	6.41E-3	4.49E-1	4.58E+0	2.33E-3	1.22E-1	3.31E-4	-5.88E+0	-1.17E+0
PENRE	MJ	2.30E+1	4.74E-1	4.15E-1	2.39E+1	1.72E-1	1.85E+0	9.61E-3	-1.28E+1	1.31E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.30E+1	4.74E-1	4.15E-1	2.39E+1	1.72E-1	1.85E+0	9.61E-3	-1.28E+1	1.31E+1
PET	MJ	2.71E+1	4.81E-1	8.64E-1	2.85E+1	1.75E-1	1.97E+0	9.94E-3	-1.87E+1	1.19E+1
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	1.62E-2	5.06E-5	1.82E-2	3.44E-2	1.84E-5	1.81E-3	1.11E-5	-1.08E-2	2.55E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.53E-4	1.14E-6	5.68E-7	1.55E-4	4.15E-7	2.92E-6	1.11E-8	-1.11E-5	1.47E-4
NHWD	kg	1.08E-1	2.77E-2	4.16E-3	1.40E-1	1.01E-2	6.41E-2	4.02E-2	-4.92E-2	2.05E-1
RWD	kg	4.56E-5	3.04E-6	1.15E-6	4.98E-5	1.10E-6	6.81E-6	5.88E-8	-2.56E-5	3.22E-5
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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