Environmental Profile

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

Ecochain v3.5.80

Product:	3025809 - PVC Branch 87°3 GY 75 S/S/S 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	4.76E-1	1.63E-2	2.33E-2	5.16E-1	6.80E-3	3.03E-1	2.10E-3	-2.68E-1	5.60E-1
GWP-f	kg CO2 eq	5.61E-1	1.63E-2	1.82E-2	5.96E-1	6.79E-3	1.88E-1	2.09E-3	-3.19E-1	4.74E-1
GWP-b	kg CO2 eq	-8.58E-2	9.91E-6	5.08E-3	-8.08E-2	4.12E-6	1.15E-1	2.65E-6	5.18E-2	8.59E-2
GWP-luluc	kg CO2 eq	7.96E-4	5.77E-6	1.91E-5	8.21E-4	2.40E-6	8.52E-5	5.57E-8	-6.00E-4	3.09E-4
ODP	kg CFC11 eq	2.89E-7	3.76E-9	2.39E-9	2.95E-7	1.57E-9	2.37E-8	7.96E-11	-1.47E-7	1.73E-7
AP	mol H+ eq	2.73E-3	9.29E-5	1.10E-4	2.94E-3	3.87E-5	4.14E-4	1.93E-6	-1.40E-3	1.99E-3
EP-fw	kg P eq	2.77E-5	1.34E-7	4.38E-7	2.83E-5	5.59E-8	2.85E-6	2.51E-9	-1.56E-5	1.56E-5
EP-m	kg N eq	5.21E-4	3.33E-5	3.18E-5	5.86E-4	1.38E-5	1.04E-4	1.19E-6	-2.64E-4	4.41E-4
EP-T	mol N eq	5.59E-3	3.66E-4	3.92E-4	6.34E-3	1.53E-4	1.14E-3	7.70E-6	-2.88E-3	4.76E-3
POCP	kg NMVOC eq	1.75E-3	1.05E-4	9.43E-5	1.95E-3	4.36E-5	3.41E-4	2.64E-6	-9.36E-4	1.40E-3
ADP-mm	kg Sb eq	5.44E-4	4.22E-7	3.98E-7	5.45E-4	1.76E-7	1.64E-6	1.93E-9	-6.32E-6	5.40E-4
ADP-f	MJ	1.36E+1	2.50E-1	2.53E-1	1.41E+1	1.04E-1	1.11E+0	5.80E-3	-7.48E+0	7.85E+0
WDP	m3 depriv.	8.69E-1	7.69E-4	4.98E-1	1.37E+0	3.20E-4	4.24E-2	3.79E-5	-4.86E-1	9.25E-1
PM	disease inc.	2.12E-8	1.47E-9	1.58E-9	2.43E-8	6.13E-10	5.18E-9	3.99E-11	-1.34E-8	1.67E-8
IR	kBq U-235 eq	3.19E-2	1.09E-3	7.14E-4	3.37E-2	4.56E-4	3.94E-3	2.66E-5	-1.70E-2	2.12E-2
ETP-fw	CTUe	2.01E+1	2.03E-1	2.60E-1	2.05E+1	8.47E-2	8.29E+0	9.07E-2	-8.33E+0	2.07E+1
HTP-c	CTUh	4.95E-10	7.24E-12	1.92E-11	5.21E-10	3.01E-12	1.25E-10	1.59E-13	-2.13E-10	4.37E-10
HTP-nc	CTUh	1.51E-8	2.42E-10	5.09E-10	1.59E-8	1.01E-10	2.93E-9	1.74E-11	-6.49E-9	1.25E-8
SQP	Pt	1.16E+1	2.14E-1	1.45E+0	1.32E+1	8.92E-2	6.80E-1	1.48E-2	-1.68E+1	-2.78E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.20E+0	3.59E-3	3.69E-1	2.57E+0	1.50E-3	7.83E-2	2.14E-4	-3.00E+0	-3.50E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.20E+0	3.59E-3	3.69E-1	2.57E+0	1.50E-3	7.83E-2	2.14E-4	-3.00E+0	-3.50E-1
PENRE	MJ	1.46E+1	2.66E-1	2.74E-1	1.51E+1	1.11E-1	1.18E+0	6.16E-3	-8.04E+0	8.39E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.46E+1	2.66E-1	2.74E-1	1.51E+1	1.11E-1	1.18E+0	6.16E-3	-8.04E+0	8.39E+0
PET	MJ	1.68E+1	2.69E-1	6.43E-1	1.77E+1	1.12E-1	1.26E+0	6.37E-3	-1.10E+1	8.04E+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	1.01E-2	2.83E-5	1.17E-2	2.18E-2	1.18E-5	1.17E-3	7.10E-6	-6.35E-3	1.66E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.88E-5	6.40E-7	3.64E-7	7.98E-5	2.67E-7	1.84E-6	7.06E-9	-6.78E-6	7.52E-5
NHWD	kg	6.50E-2	1.55E-2	2.67E-3	8.31E-2	6.46E-3	4.05E-2	2.58E-2	-2.94E-2	1.27E-1
RWD	kg	2.84E-5	1.70E-6	7.37E-7	3.08E-5	7.09E-7	4.29E-6	3.78E-8	-1.54E-5	2.05E-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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