Environmental Profile

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

Ecochain v3.5.80

Product:	3025556 - PVC Bend 22°3 GY 50 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	9.60E-2	3.27E-3	4.89E-3	1.04E-1	1.32E-3	7.06E-2	4.05E-4	-5.40E-2	1.22E-1
GWP-f	kg CO2 eq	1.18E-1	3.27E-3	3.74E-3	1.25E-1	1.32E-3	4.18E-2	4.05E-4	-6.70E-2	1.01E-1
GWP-b	kg CO2 eq	-2.19E-2	1.98E-6	1.15E-3	-2.08E-2	7.99E-7	2.87E-2	5.08E-7	1.31E-2	2.10E-2
GWP-luluc	kg CO2 eq	1.76E-4	1.16E-6	4.93E-6	1.82E-4	4.66E-7	1.64E-5	1.09E-8	-1.40E-4	5.98E-5
ODP	kg CFC11 eq	5.62E-8	7.53E-10	5.00E-10	5.75E-8	3.03E-10	4.56E-9	1.54E-11	-2.88E-8	3.35E-8
AP	mol H+ eq	5.75E-4	1.86E-5	2.67E-5	6.20E-4	7.50E-6	8.18E-5	3.74E-7	-2.90E-4	4.20E-4
EP-fw	kg P eq	5.68E-6	2.69E-8	9.13E-8	5.79E-6	1.08E-8	5.50E-7	4.90E-10	-3.31E-6	3.05E-6
EP-m	kg N eq	1.12E-4	6.66E-6	7.44E-6	1.26E-4	2.68E-6	2.09E-5	2.27E-7	-5.61E-5	9.33E-5
EP-T	mol N eq	1.19E-3	7.34E-5	9.64E-5	1.36E-3	2.96E-5	2.30E-4	1.49E-6	-6.17E-4	1.01E-3
POCP	kg NMVOC eq	3.78E-4	2.10E-5	2.20E-5	4.21E-4	8.45E-6	6.88E-5	5.11E-7	-1.98E-4	3.01E-4
ADP-mm	kg Sb eq	9.91E-5	8.46E-8	1.05E-7	9.93E-5	3.40E-8	3.23E-7	3.76E-10	-1.25E-6	9.84E-5
ADP-f	MJ	2.86E+0	5.02E-2	5.12E-2	2.97E+0	2.02E-2	2.17E-1	1.12E-3	-1.53E+0	1.67E+0
WDP	m3 depriv.	1.70E-1	1.54E-4	9.36E-2	2.64E-1	6.20E-5	8.12E-3	7.96E-6	-9.83E-2	1.74E-1
PM	disease inc.	4.83E-9	2.95E-10	3.72E-10	5.50E-9	1.19E-10	1.03E-9	7.72E-12	-2.98E-9	3.68E-9
IR	kBq U-235 eq	6.64E-3	2.19E-4	1.37E-4	7.00E-3	8.83E-5	7.74E-4	5.14E-6	-3.51E-3	4.36E-3
ETP-fw	CTUe	4.30E+0	4.07E-2	6.36E-2	4.40E+0	1.64E-2	1.58E+0	1.72E-2	-1.86E+0	4.16E+0
HTP-c	CTUh	9.90E-11	1.45E-12	4.25E-12	1.05E-10	5.84E-13	2.56E-11	3.11E-14	-4.48E-11	8.61E-11
HTP-nc	CTUh	2.97E-9	4.86E-11	1.20E-10	3.13E-9	1.96E-11	5.71E-10	3.31E-12	-1.33E-9	2.40E-9
SQP	Pt	2.81E+0	4.29E-2	4.32E-1	3.29E+0	1.73E-2	1.34E-1	2.86E-3	-4.15E+0	-7.11E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.18E-1	7.20E-4	1.10E-1	6.28E-1	2.90E-4	1.51E-2	4.09E-5	-7.34E-1	-9.02E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.18E-1	7.20E-4	1.10E-1	6.28E-1	2.90E-4	1.51E-2	4.09E-5	-7.34E-1	-9.02E-2
PENRE	MJ	3.07E+0	5.33E-2	5.52E-2	3.18E+0	2.14E-2	2.31E-1	1.19E-3	-1.65E+0	1.78E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.07E+0	5.33E-2	5.52E-2	3.18E+0	2.14E-2	2.31E-1	1.19E-3	-1.65E+0	1.78E+0
PET	MJ	3.59E+0	5.40E-2	1.65E-1	3.81E+0	2.17E-2	2.46E-1	1.23E-3	-2.39E+0	1.69E+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	2.06E-3	5.68E-6	2.19E-3	4.26E-3	2.29E-6	2.25E-4	1.37E-6	-1.35E-3	3.14E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.46E-5	1.28E-7	6.83E-8	1.48E-5	5.17E-8	3.66E-7	1.37E-9	-1.44E-6	1.37E-5
NHWD	kg	1.36E-2	3.11E-3	5.02E-4	1.72E-2	1.25E-3	8.24E-3	5.01E-3	-6.12E-3	2.56E-2
RWD	kg	6.14E-6	3.41E-7	1.38E-7	6.61E-6	1.37E-7	8.51E-7	7.30E-9	-3.20E-6	4.41E-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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