Environmental Profile

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

Ecochain v3.5.80

Product:	3025730 - PVC Bend 22°3 GY 40 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	6.97E-2	2.56E-3	3.73E-3	7.59E-2	9.48E-4	6.06E-2	2.90E-4	-3.42E-2	1.04E-1
GWP-f	kg CO2 eq	9.15E-2	2.56E-3	2.80E-3	9.69E-2	9.48E-4	2.95E-2	2.90E-4	-5.26E-2	7.50E-2
GWP-b	kg CO2 eq	-2.20E-2	1.55E-6	9.29E-4	-2.11E-2	5.75E-7	3.11E-2	3.59E-7	1.85E-2	2.85E-2
GWP-luluc	kg CO2 eq	1.82E-4	9.06E-7	4.37E-6	1.87E-4	3.35E-7	1.18E-5	8.03E-9	-1.67E-4	3.28E-5
ODP	kg CFC11 eq	4.04E-8	5.90E-10	3.80E-10	4.14E-8	2.18E-10	3.31E-9	1.10E-11	-2.11E-8	2.38E-8
AP	mol H+ eq	4.62E-4	1.46E-5	2.28E-5	5.00E-4	5.40E-6	6.23E-5	2.68E-7	-2.54E-4	3.13E-4
EP-fw	kg P eq	4.66E-6	2.11E-8	6.95E-8	4.75E-6	7.80E-9	3.96E-7	3.57E-10	-3.19E-6	1.97E-6
EP-m	kg N eq	9.72E-5	5.22E-6	6.20E-6	1.09E-4	1.93E-6	1.65E-5	1.60E-7	-5.12E-5	7.59E-5
EP-T	mol N eq	1.02E-3	5.75E-5	8.30E-5	1.17E-3	2.13E-5	1.81E-4	1.07E-6	-5.71E-4	7.98E-4
POCP	kg NMVOC eq	3.07E-4	1.64E-5	1.83E-5	3.41E-4	6.08E-6	5.43E-5	3.67E-7	-1.75E-4	2.27E-4
ADP-mm	kg Sb eq	9.83E-5	6.62E-8	9.51E-8	9.85E-5	2.45E-8	2.48E-7	2.72E-10	-9.60E-7	9.78E-5
ADP-f	MJ	2.13E+0	3.93E-2	3.79E-2	2.21E+0	1.45E-2	1.63E-1	8.05E-4	-1.17E+0	1.21E+0
WDP	m3 depriv.	1.22E-1	1.21E-4	6.45E-2	1.86E-1	4.46E-5	5.74E-3	6.51E-6	-8.31E-2	1.09E-1
PM	disease inc.	4.31E-9	2.31E-10	3.10E-10	4.85E-9	8.55E-11	8.03E-10	5.53E-12	-3.10E-9	2.64E-9
IR	kBq U-235 eq	5.24E-3	1.72E-4	9.65E-5	5.51E-3	6.36E-5	5.86E-4	3.67E-6	-3.09E-3	3.07E-3
ETP-fw	CTUe	4.46E+0	3.19E-2	5.47E-2	4.55E+0	1.18E-2	1.11E+0	1.19E-2	-2.05E+0	3.63E+0
HTP-c	CTUh	8.25E-11	1.14E-12	3.40E-12	8.70E-11	4.20E-13	2.00E-11	2.28E-14	-3.94E-11	6.80E-11
HTP-nc	CTUh	2.39E-9	3.80E-11	1.00E-10	2.53E-9	1.41E-11	4.16E-10	2.30E-12	-1.14E-9	1.82E-9
SQP	Pt	2.93E+0	3.36E-2	4.15E-1	3.37E+0	1.24E-2	1.01E-1	2.05E-3	-5.08E+0	-1.59E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.24E-1	5.64E-4	1.05E-1	6.30E-1	2.09E-4	1.09E-2	2.87E-5	-8.92E-1	-2.51E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.24E-1	5.64E-4	1.05E-1	6.30E-1	2.09E-4	1.09E-2	2.87E-5	-8.92E-1	-2.51E-1
PENRE	MJ	2.28E+0	4.17E-2	4.08E-2	2.37E+0	1.54E-2	1.73E-1	8.54E-4	-1.26E+0	1.30E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.28E+0	4.17E-2	4.08E-2	2.37E+0	1.54E-2	1.73E-1	8.54E-4	-1.26E+0	1.30E+0
PET	MJ	2.81E+0	4.23E-2	1.46E-1	3.00E+0	1.57E-2	1.84E-1	8.83E-4	-2.15E+0	1.04E+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	1.57E-3	4.45E-6	1.51E-3	3.09E-3	1.65E-6	1.61E-4	9.79E-7	-1.31E-3	1.95E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.41E-5	1.00E-7	4.70E-8	1.42E-5	3.72E-8	2.83E-7	9.90E-10	-1.15E-6	1.34E-5
NHWD	kg	1.15E-2	2.44E-3	3.46E-4	1.43E-2	9.02E-4	6.23E-3	3.60E-3	-5.32E-3	1.97E-2
RWD	kg	4.96E-6	2.67E-7	9.50E-8	5.32E-6	9.89E-8	6.60E-7	5.23E-9	-2.86E-6	3.23E-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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