

Environmental Profile

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

Ecochain v3.5.80



Product: 3025891 - PVC Bend 45° GY 63 S/S BC
 Unit: 1 Piece
 Manufacturer: Wavin - FR - Varennes

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



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.

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	☑	☑	☑	☑									

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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.71E-1	5.43E-3	9.32E-3	1.85E-1	2.32E-3	9.76E-2	7.16E-4	-9.55E-2	1.91E-1
GWP-f	kg CO2 eq	1.92E-1	5.42E-3	7.04E-3	2.04E-1	2.32E-3	6.89E-2	7.16E-4	-1.08E-1	1.68E-1
GWP-b	kg CO2 eq	-2.12E-2	3.29E-6	2.27E-3	-1.89E-2	1.41E-6	2.87E-2	9.00E-7	1.28E-2	2.25E-2
GWP-luluc	kg CO2 eq	2.45E-4	1.92E-6	1.03E-5	2.57E-4	8.20E-7	2.87E-5	1.92E-8	-1.67E-4	1.20E-4
ODP	kg CFC11 eq	9.74E-8	1.25E-9	9.51E-10	9.96E-8	5.34E-10	7.92E-9	2.71E-11	-4.97E-8	5.83E-8
AP	mol H+ eq	9.31E-4	3.09E-5	5.46E-5	1.02E-3	1.32E-5	1.38E-4	6.59E-7	-4.47E-4	7.21E-4
EP-fw	kg P eq	9.25E-6	4.46E-8	1.74E-7	9.47E-6	1.91E-8	9.60E-7	8.63E-10	-4.84E-6	5.61E-6
EP-m	kg N eq	1.73E-4	1.11E-5	1.50E-5	1.99E-4	4.72E-6	3.45E-5	4.02E-7	-8.33E-5	1.55E-4
EP-T	mol N eq	1.87E-3	1.22E-4	1.98E-4	2.18E-3	5.20E-5	3.80E-4	2.63E-6	-9.06E-4	1.71E-3
POCP	kg NMVOC eq	5.96E-4	3.48E-5	4.43E-5	6.75E-4	1.49E-5	1.14E-4	9.02E-7	-2.98E-4	5.06E-4
ADP-mm	kg Sb eq	1.97E-4	1.40E-7	2.23E-7	1.98E-4	5.99E-8	5.46E-7	6.62E-10	-2.10E-6	1.96E-4
ADP-f	MJ	4.72E+0	8.32E-2	9.57E-2	4.90E+0	3.56E-2	3.72E-1	1.98E-3	-2.54E+0	2.78E+0
WDP	m3 depriv.	2.96E-1	2.55E-4	1.68E-1	4.64E-1	1.09E-4	1.43E-2	1.38E-5	-1.58E-1	3.20E-1
PM	disease inc.	7.06E-9	4.90E-10	7.48E-10	8.30E-9	2.09E-10	1.73E-9	1.36E-11	-3.97E-9	6.28E-9
IR	kBq U-235 eq	1.09E-2	3.64E-4	2.49E-4	1.15E-2	1.55E-4	1.32E-3	9.07E-6	-5.44E-3	7.58E-3
ETP-fw	CTUe	6.39E+0	6.76E-2	1.30E-1	6.58E+0	2.89E-2	2.78E+0	3.05E-2	-2.44E+0	6.99E+0
HTP-c	CTUh	1.66E-10	2.41E-12	8.33E-12	1.77E-10	1.03E-12	4.29E-11	5.48E-14	-6.68E-11	1.54E-10
HTP-nc	CTUh	5.16E-9	8.06E-11	2.41E-10	5.48E-9	3.44E-11	9.88E-10	5.87E-12	-2.09E-9	4.42E-9
SQP	Pt	3.08E+0	7.12E-2	9.51E-1	4.10E+0	3.04E-2	2.29E-1	5.05E-3	-4.26E+0	1.03E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.15E-1	1.19E-3	2.41E-1	8.57E-1	5.10E-4	2.64E-2	7.24E-5	-7.78E-1	1.07E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.15E-1	1.19E-3	2.41E-1	8.57E-1	5.10E-4	2.64E-2	7.24E-5	-7.78E-1	1.07E-1
PENRE	MJ	5.07E+0	8.84E-2	1.03E-1	5.26E+0	3.77E-2	3.96E-1	2.10E-3	-2.73E+0	2.96E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.07E+0	8.84E-2	1.03E-1	5.26E+0	3.77E-2	3.96E-1	2.10E-3	-2.73E+0	2.96E+0
PET	MJ	5.68E+0	8.96E-2	3.45E-1	6.12E+0	3.83E-2	4.22E-1	2.17E-3	-3.51E+0	3.07E+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	3.45E-3	9.42E-6	3.94E-3	7.40E-3	4.02E-6	3.94E-4	2.42E-6	-1.97E-3	5.83E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.83E-5	2.13E-7	1.22E-7	2.86E-5	9.09E-8	6.15E-7	2.42E-9	-2.27E-6	2.70E-5
NHWD	kg	2.13E-2	5.16E-3	9.01E-4	2.74E-2	2.20E-3	1.38E-2	8.81E-3	-9.31E-3	4.29E-2
RWD	kg	9.81E-6	5.66E-7	2.48E-7	1.06E-5	2.42E-7	1.43E-6	1.29E-8	-4.90E-6	7.41E-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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