

Environmental Profile

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

Ecochain v3.5.80



Product: 3026047 - PVC Bend 45° GY 40 S/SP 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	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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.79E-2	2.45E-3	3.25E-3	7.36E-2	9.48E-4	6.04E-2	2.90E-4	-3.83E-2	9.70E-2
GWP-f	kg CO2 eq	8.99E-2	2.45E-3	2.50E-3	9.48E-2	9.48E-4	3.17E-2	2.90E-4	-5.13E-2	7.64E-2
GWP-b	kg CO2 eq	-2.22E-2	1.49E-6	7.48E-4	-2.14E-2	5.75E-7	2.87E-2	3.59E-7	1.32E-2	2.05E-2
GWP-luluc	kg CO2 eq	1.55E-4	8.66E-7	3.11E-6	1.59E-4	3.35E-7	1.17E-5	8.03E-9	-1.29E-4	4.12E-5
ODP	kg CFC11 eq	3.99E-8	5.64E-10	3.33E-10	4.08E-8	2.18E-10	3.24E-9	1.10E-11	-2.09E-8	2.34E-8
AP	mol H+ eq	4.50E-4	1.39E-5	1.71E-5	4.81E-4	5.40E-6	6.01E-5	2.68E-7	-2.30E-4	3.16E-4
EP-fw	kg P eq	4.43E-6	2.01E-8	6.09E-8	4.51E-6	7.80E-9	3.91E-7	3.57E-10	-2.72E-6	2.19E-6
EP-m	kg N eq	9.06E-5	4.99E-6	4.81E-6	1.00E-4	1.93E-6	1.57E-5	1.60E-7	-4.58E-5	7.24E-5
EP-T	mol N eq	9.67E-4	5.50E-5	6.15E-5	1.08E-3	2.13E-5	1.73E-4	1.07E-6	-5.08E-4	7.71E-4
POCP	kg NMVOC eq	3.01E-4	1.57E-5	1.42E-5	3.31E-4	6.08E-6	5.17E-5	3.67E-7	-1.60E-4	2.29E-4
ADP-mm	kg Sb eq	9.83E-5	6.33E-8	6.61E-8	9.84E-5	2.45E-8	2.37E-7	2.72E-10	-9.26E-7	9.77E-5
ADP-f	MJ	2.14E+0	3.76E-2	3.44E-2	2.22E+0	1.45E-2	1.58E-1	8.05E-4	-1.15E+0	1.24E+0
WDP	m3 depriv.	1.22E-1	1.15E-4	6.43E-2	1.86E-1	4.46E-5	5.71E-3	6.51E-6	-7.56E-2	1.17E-1
PM	disease inc.	4.02E-9	2.21E-10	2.40E-10	4.48E-9	8.55E-11	7.69E-10	5.53E-12	-2.60E-9	2.74E-9
IR	kBq U-235 eq	5.10E-3	1.64E-4	9.35E-5	5.36E-3	6.36E-5	5.66E-4	3.67E-6	-2.77E-3	3.22E-3
ETP-fw	CTUe	3.83E+0	3.05E-2	4.07E-2	3.91E+0	1.18E-2	1.10E+0	1.19E-2	-1.64E+0	3.39E+0
HTP-c	CTUh	8.08E-11	1.09E-12	2.79E-12	8.47E-11	4.20E-13	1.96E-11	2.28E-14	-3.65E-11	6.82E-11
HTP-nc	CTUh	2.35E-9	3.64E-11	7.73E-11	2.46E-9	1.41E-11	4.10E-10	2.30E-12	-1.04E-9	1.85E-9
SQP	Pt	2.72E+0	3.21E-2	2.64E-1	3.02E+0	1.24E-2	9.84E-2	2.05E-3	-4.11E+0	-9.82E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.83E-1	5.39E-4	6.70E-2	5.50E-1	2.09E-4	1.07E-2	2.87E-5	-7.18E-1	-1.56E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.83E-1	5.39E-4	6.70E-2	5.50E-1	2.09E-4	1.07E-2	2.87E-5	-7.18E-1	-1.56E-1
PENRE	MJ	2.30E+0	3.99E-2	3.72E-2	2.38E+0	1.54E-2	1.68E-1	8.54E-4	-1.24E+0	1.32E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.30E+0	3.99E-2	3.72E-2	2.38E+0	1.54E-2	1.68E-1	8.54E-4	-1.24E+0	1.32E+0
PET	MJ	2.78E+0	4.04E-2	1.04E-1	2.93E+0	1.57E-2	1.79E-1	8.83E-4	-1.96E+0	1.16E+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	1.56E-3	4.25E-6	1.51E-3	3.07E-3	1.65E-6	1.59E-4	9.79E-7	-1.11E-3	2.12E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.40E-5	9.60E-8	4.70E-8	1.41E-5	3.72E-8	2.72E-7	9.90E-10	-1.12E-6	1.33E-5
NHWD	kg	1.08E-2	2.33E-3	3.45E-4	1.35E-2	9.02E-4	6.16E-3	3.60E-3	-4.91E-3	1.93E-2
RWD	kg	4.79E-6	2.55E-7	9.50E-8	5.14E-6	9.89E-8	6.31E-7	5.23E-9	-2.55E-6	3.32E-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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