Environmental Profile

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

Ecochain v3.5.80

Product:	3027788 - Gutter Bend 45° LGY 50 S/S V2
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	1.22E-1	4.12E-3	5.60E-3	1.31E-1	1.55E-3	7.71E-2	4.90E-4	-6.39E-2	1.47E-1
GWP-f	kg CO2 eq	1.43E-1	4.11E-3	4.31E-3	1.52E-1	1.55E-3	4.84E-2	4.90E-4	-7.67E-2	1.25E-1
GWP-b	kg CO2 eq	-2.17E-2	2.50E-6	1.28E-3	-2.04E-2	9.43E-7	2.87E-2	5.98E-7	1.30E-2	2.13E-2
GWP-luluc	kg CO2 eq	2.02E-4	1.46E-6	5.31E-6	2.08E-4	5.50E-7	1.89E-5	1.36E-8	-1.46E-4	8.16E-5
ODP	kg CFC11 eq	6.36E-8	9.48E-10	5.73E-10	6.51E-8	3.58E-10	5.19E-9	1.82E-11	-3.39E-8	3.68E-8
AP	mol H+ eq	8.76E-4	2.34E-5	2.93E-5	9.29E-4	8.85E-6	9.35E-5	4.46E-7	-3.28E-4	7.04E-4
EP-fw	kg P eq	7.07E-6	3.38E-8	1.05E-7	7.21E-6	1.28E-8	6.31E-7	6.02E-10	-3.68E-6	4.17E-6
EP-m	kg N eq	1.39E-4	8.38E-6	8.25E-6	1.55E-4	3.17E-6	2.38E-5	2.65E-7	-6.27E-5	1.20E-4
EP-T	mol N eq	1.48E-3	9.24E-5	1.05E-4	1.68E-3	3.49E-5	2.62E-4	1.77E-6	-6.87E-4	1.29E-3
POCP	kg NMVOC eq	4.73E-4	2.64E-5	2.44E-5	5.24E-4	9.97E-6	7.84E-5	6.10E-7	-2.22E-4	3.91E-4
ADP-mm	kg Sb eq	1.48E-4	1.06E-7	1.13E-7	1.48E-4	4.02E-8	3.69E-7	4.54E-10	-1.46E-6	1.47E-4
ADP-f	MJ	3.29E+0	6.31E-2	5.93E-2	3.41E+0	2.38E-2	2.50E-1	1.33E-3	-1.77E+0	1.91E+0
WDP	m3 depriv.	2.09E-1	1.94E-4	1.11E-1	3.20E-1	7.32E-5	9.30E-3	1.18E-5	-1.13E-1	2.16E-1
PM	disease inc.	5.97E-9	3.71E-10	4.11E-10	6.75E-9	1.40E-10	1.18E-9	9.17E-12	-3.22E-9	4.86E-9
IR	kBq U-235 eq	7.76E-3	2.76E-4	1.61E-4	8.20E-3	1.04E-4	8.87E-4	6.06E-6	-3.98E-3	5.22E-3
ETP-fw	CTUe	5.30E+0	5.13E-2	6.96E-2	5.42E+0	1.94E-2	1.79E+0	1.95E-2	-2.00E+0	5.25E+0
HTP-c	CTUh	1.53E-10	1.82E-12	4.78E-12	1.60E-10	6.89E-13	3.09E-11	3.86E-14	-5.01E-11	1.41E-10
HTP-nc	CTUh	3.93E-9	6.11E-11	1.32E-10	4.13E-9	2.31E-11	6.57E-10	3.79E-12	-1.51E-9	3.30E-9
SQP	Pt	2.95E+0	5.40E-2	4.49E-1	3.46E+0	2.04E-2	1.55E-1	3.39E-3	-4.18E+0	-5.45E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.55E-1	9.06E-4	1.14E-1	6.70E-1	3.42E-4	1.73E-2	4.74E-5	-7.45E-1	-5.69E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.55E-1	9.06E-4	1.14E-1	6.70E-1	3.42E-4	1.73E-2	4.74E-5	-7.45E-1	-5.69E-2
PENRE	MJ	3.53E+0	6.70E-2	6.40E-2	3.66E+0	2.53E-2	2.66E-1	1.41E-3	-1.91E+0	2.04E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.53E+0	6.70E-2	6.40E-2	3.66E+0	2.53E-2	2.66E-1	1.41E-3	-1.91E+0	2.04E+0
PET	MJ	4.08E+0	6.79E-2	1.78E-1	4.33E+0	2.57E-2	2.83E-1	1.46E-3	-2.65E+0	1.98E+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	2.73E-3	7.14E-6	2.60E-3	5.34E-3	2.70E-6	2.58E-4	1.62E-6	-1.50E-3	4.10E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.11E-5	1.61E-7	8.11E-8	2.14E-5	6.10E-8	4.21E-7	1.65E-9	-1.63E-6	2.02E-5
NHWD	kg	2.40E-2	3.91E-3	5.96E-4	2.85E-2	1.48E-3	9.53E-3	5.91E-3	-6.89E-3	3.85E-2
RWD	kg	6.92E-6	4.29E-7	1.64E-7	7.52E-6	1.62E-7	9.74E-7	8.63E-9	-3.61E-6	5.05E-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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