Environmental Profile

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

Ecochain v3.5.80

Product:	3025917 - Gutter Bend 67°3 LGY 80 S/SP
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	3.50E-1	1.21E-2	1.50E-2	3.77E-1	4.58E-3	2.21E-1	1.45E-3	-1.78E-1	4.26E-1
GWP-f	kg CO2 eq	4.14E-1	1.21E-2	1.18E-2	4.38E-1	4.58E-3	1.31E-1	1.45E-3	-2.24E-1	3.51E-1
GWP-b	kg CO2 eq	-6.45E-2	7.32E-6	3.18E-3	-6.13E-2	2.78E-6	8.96E-2	1.78E-6	4.71E-2	7.54E-2
GWP-luluc	kg CO2 eq	6.32E-4	4.27E-6	1.13E-5	6.48E-4	1.62E-6	5.64E-5	3.98E-8	-4.93E-4	2.13E-4
ODP	kg CFC11 eq	1.90E-7	2.78E-9	1.54E-9	1.95E-7	1.06E-9	1.56E-8	5.39E-11	-1.00E-7	1.11E-7
AP	mol H+ eq	2.47E-3	6.87E-5	6.70E-5	2.61E-3	2.61E-5	2.80E-4	1.32E-6	-1.01E-3	1.91E-3
EP-fw	kg P eq	2.09E-5	9.92E-8	2.82E-7	2.12E-5	3.77E-8	1.88E-6	1.77E-9	-1.16E-5	1.15E-5
EP-m	kg N eq	4.09E-4	2.46E-5	1.96E-5	4.53E-4	9.34E-6	7.12E-5	7.88E-7	-1.93E-4	3.41E-4
EP-T	mol N eq	4.35E-3	2.71E-4	2.36E-4	4.86E-3	1.03E-4	7.84E-4	5.23E-6	-2.12E-3	3.63E-3
POCP	kg NMVOC eq	1.36E-3	7.74E-5	5.81E-5	1.49E-3	2.94E-5	2.35E-4	1.80E-6	-6.78E-4	1.08E-3
ADP-mm	kg Sb eq	4.43E-4	3.12E-7	2.31E-7	4.44E-4	1.18E-7	1.11E-6	1.34E-9	-4.37E-6	4.41E-4
ADP-f	MJ	9.46E+0	1.85E-1	1.65E-1	9.81E+0	7.03E-2	7.47E-1	3.94E-3	-5.20E+0	5.43E+0
WDP	m3 depriv.	6.08E-1	5.68E-4	3.33E-1	9.42E-1	2.16E-4	2.78E-2	3.32E-5	-3.46E-1	6.23E-1
PM	disease inc.	1.74E-8	1.09E-9	9.75E-10	1.95E-8	4.13E-10	3.55E-9	2.71E-11	-1.03E-8	1.31E-8
IR	kBq U-235 eq	2.29E-2	8.09E-4	4.73E-4	2.42E-2	3.07E-4	2.66E-3	1.79E-5	-1.23E-2	1.49E-2
ETP-fw	CTUe	1.65E+1	1.50E-1	1.57E-1	1.68E+1	5.71E-2	5.38E+0	5.85E-2	-6.57E+0	1.57E+1
HTP-c	CTUh	4.40E-10	5.35E-12	1.21E-11	4.57E-10	2.03E-12	9.01E-11	1.13E-13	-1.53E-10	3.96E-10
HTP-nc	CTUh	1.16E-8	1.79E-10	3.13E-10	1.21E-8	6.81E-11	1.95E-9	1.13E-11	-4.64E-9	9.45E-9
SQP	Pt	9.07E+0	1.58E-1	7.90E-1	1.00E+1	6.01E-2	4.62E-1	1.00E-2	-1.40E+1	-3.43E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.71E+0	2.65E-3	2.01E-1	1.91E+0	1.01E-3	5.18E-2	1.41E-4	-2.49E+0	-5.31E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.71E+0	2.65E-3	2.01E-1	1.91E+0	1.01E-3	5.18E-2	1.41E-4	-2.49E+0	-5.31E-1
PENRE	MJ	1.01E+1	1.96E-1	1.79E-1	1.05E+1	7.46E-2	7.95E-1	4.18E-3	-5.59E+0	5.80E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.01E+1	1.96E-1	1.79E-1	1.05E+1	7.46E-2	7.95E-1	4.18E-3	-5.59E+0	5.80E+0
PET	MJ	1.19E+1	1.99E-1	3.80E-1	1.24E+1	7.57E-2	8.46E-1	4.32E-3	-8.08E+0	5.27E+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	7.80E-3	2.09E-5	7.79E-3	1.56E-2	7.96E-6	7.69E-4	4.78E-6	-4.75E-3	1.16E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.33E-5	4.73E-7	2.43E-7	6.40E-5	1.80E-7	1.26E-6	4.85E-9	-4.80E-6	6.06E-5
NHWD	kg	6.76E-2	1.15E-2	1.78E-3	8.08E-2	4.36E-3	2.78E-2	1.74E-2	-2.11E-2	1.09E-1
RWD	kg	2.05E-5	1.26E-6	4.92E-7	2.22E-5	4.78E-7	2.93E-6	2.55E-8	-1.12E-5	1.45E-5
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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