Environmental Profile

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

Ecochain v3.5.80

Product:	3025579 - Gutter Bend 67°3 WT 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	3.65E-1	1.19E-2	1.51E-2	3.92E-1	4.56E-3	2.15E-1	1.46E-3	-1.79E-1	4.34E-1
GWP-f	kg CO2 eq	4.29E-1	1.19E-2	1.19E-2	4.53E-1	4.55E-3	1.29E-1	1.46E-3	-2.18E-1	3.70E-1
GWP-b	kg CO2 eq	-6.44E-2	7.22E-6	3.20E-3	-6.12E-2	2.77E-6	8.61E-2	1.76E-6	3.90E-2	6.39E-2
GWP-luluc	kg CO2 eq	5.99E-4	4.21E-6	1.14E-5	6.14E-4	1.61E-6	5.49E-5	4.10E-8	-4.36E-4	2.35E-4
ODP	kg CFC11 eq	1.86E-7	2.74E-9	1.55E-9	1.90E-7	1.05E-9	1.50E-8	5.36E-11	-9.90E-8	1.07E-7
AP	mol H+ eq	3.12E-3	6.77E-5	6.76E-5	3.26E-3	2.59E-5	2.70E-4	1.32E-6	-9.64E-4	2.59E-3
EP-fw	kg P eq	2.16E-5	9.78E-8	2.83E-7	2.20E-5	3.75E-8	1.83E-6	1.80E-9	-1.09E-5	1.30E-5
EP-m	kg N eq	4.28E-4	2.42E-5	1.98E-5	4.72E-4	9.28E-6	6.86E-5	7.75E-7	-1.84E-4	3.67E-4
EP-T	mol N eq	4.52E-3	2.67E-4	2.39E-4	5.02E-3	1.02E-4	7.56E-4	5.22E-6	-2.01E-3	3.87E-3
POCP	kg NMVOC eq	1.45E-3	7.63E-5	5.85E-5	1.59E-3	2.92E-5	2.27E-4	1.80E-6	-6.50E-4	1.19E-3
ADP-mm	kg Sb eq	4.43E-4	3.07E-7	2.34E-7	4.44E-4	1.18E-7	1.07E-6	1.35E-9	-4.29E-6	4.40E-4
ADP-f	MJ	9.47E+0	1.82E-1	1.66E-1	9.82E+0	6.99E-2	7.27E-1	3.92E-3	-5.09E+0	5.54E+0
WDP	m3 depriv.	6.28E-1	5.60E-4	3.33E-1	9.62E-1	2.15E-4	2.69E-2	3.80E-5	-3.33E-1	6.56E-1
PM	disease inc.	1.91E-8	1.07E-9	9.83E-10	2.12E-8	4.11E-10	3.44E-9	2.70E-11	-9.55E-9	1.55E-8
IR	kBq U-235 eq	2.35E-2	7.97E-4	4.74E-4	2.48E-2	3.06E-4	2.58E-3	1.78E-5	-1.17E-2	1.60E-2
ETP-fw	CTUe	1.63E+1	1.48E-1	1.59E-1	1.66E+1	5.68E-2	5.17E+0	5.63E-2	-5.94E+0	1.59E+1
HTP-c	CTUh	5.43E-10	5.27E-12	1.21E-11	5.60E-10	2.02E-12	9.08E-11	1.16E-13	-1.48E-10	5.05E-10
HTP-nc	CTUh	1.23E-8	1.77E-10	3.16E-10	1.28E-8	6.77E-11	1.90E-9	1.10E-11	-4.46E-9	1.03E-8
SQP	Pt	8.97E+0	1.56E-1	8.05E-1	9.93E+0	5.98E-2	4.53E-1	9.97E-3	-1.25E+1	-2.07E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.68E+0	2.62E-3	2.05E-1	1.88E+0	1.00E-3	5.03E-2	1.38E-4	-2.23E+0	-2.94E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.68E+0	2.62E-3	2.05E-1	1.88E+0	1.00E-3	5.03E-2	1.38E-4	-2.23E+0	-2.94E-1
PENRE	MJ	1.02E+1	1.94E-1	1.79E-1	1.05E+1	7.42E-2	7.74E-1	4.16E-3	-5.47E+0	5.91E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.02E+1	1.94E-1	1.79E-1	1.05E+1	7.42E-2	7.74E-1	4.16E-3	-5.47E+0	5.91E+0
PET	MJ	1.18E+1	1.96E-1	3.84E-1	1.24E+1	7.52E-2	8.24E-1	4.30E-3	-7.70E+0	5.62E+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	8.58E-3	2.06E-5	7.79E-3	1.64E-2	7.91E-6	7.44E-4	4.74E-6	-4.43E-3	1.27E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.33E-5	4.66E-7	2.43E-7	6.40E-5	1.79E-7	1.22E-6	4.88E-9	-4.66E-6	6.08E-5
NHWD	kg	9.40E-2	1.13E-2	1.78E-3	1.07E-1	4.33E-3	2.73E-2	1.73E-2	-2.04E-2	1.36E-1
RWD	kg	2.13E-5	1.24E-6	4.92E-7	2.30E-5	4.75E-7	2.83E-6	2.54E-8	-1.06E-5	1.57E-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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