Environmental Profile

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

Ecochain v3.5.80

Product:	3025867 - Gutter Branch 67°3 Sand 80 S/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	5.10E-1	1.80E-2	2.33E-2	5.51E-1	6.93E-3	3.04E-1	2.19E-3	-2.76E-1	5.89E-1
GWP-f	kg CO2 eq	5.94E-1	1.80E-2	1.83E-2	6.31E-1	6.92E-3	1.92E-1	2.19E-3	-3.21E-1	5.10E-1
GWP-b	kg CO2 eq	-8.55E-2	1.09E-5	4.99E-3	-8.05E-2	4.20E-6	1.12E-1	2.69E-6	4.64E-2	7.84E-2
GWP-luluc	kg CO2 eq	8.08E-4	6.38E-6	1.82E-5	8.33E-4	2.45E-6	8.46E-5	6.02E-8	-5.67E-4	3.53E-4
ODP	kg CFC11 eq	2.85E-7	4.15E-9	2.39E-9	2.92E-7	1.60E-9	2.32E-8	8.15E-11	-1.50E-7	1.67E-7
AP	mol H+ eq	3.53E-3	1.03E-4	1.07E-4	3.74E-3	3.94E-5	4.10E-4	1.99E-6	-1.39E-3	2.80E-3
EP-fw	kg P eq	2.97E-5	1.48E-7	4.37E-7	3.03E-5	5.70E-8	2.83E-6	2.67E-9	-1.54E-5	1.78E-5
EP-m	kg N eq	5.67E-4	3.67E-5	3.10E-5	6.35E-4	1.41E-5	1.03E-4	1.19E-6	-2.62E-4	4.91E-4
EP-T	mol N eq	6.09E-3	4.05E-4	3.77E-4	6.87E-3	1.55E-4	1.13E-3	7.91E-6	-2.86E-3	5.31E-3
POCP	kg NMVOC eq	1.92E-3	1.16E-4	9.18E-5	2.13E-3	4.45E-5	3.39E-4	2.72E-6	-9.35E-4	1.58E-3
ADP-mm	kg Sb eq	6.89E-4	4.66E-7	3.75E-7	6.90E-4	1.79E-7	1.63E-6	2.02E-9	-6.42E-6	6.85E-4
ADP-f	MJ	1.38E+1	2.77E-1	2.55E-1	1.43E+1	1.06E-1	1.11E+0	5.95E-3	-7.57E+0	7.97E+0
WDP	m3 depriv.	9.06E-1	8.49E-4	5.08E-1	1.41E+0	3.26E-4	4.19E-2	5.01E-5	-4.88E-1	9.69E-1
PM	disease inc.	2.38E-8	1.63E-9	1.54E-9	2.70E-8	6.25E-10	5.18E-9	4.10E-11	-1.31E-8	1.97E-8
IR	kBq U-235 eq	3.33E-2	1.21E-3	7.25E-4	3.52E-2	4.64E-4	3.92E-3	2.71E-5	-1.70E-2	2.27E-2
ETP-fw	CTUe	2.18E+1	2.25E-1	2.50E-1	2.23E+1	8.63E-2	8.11E+0	8.87E-2	-8.01E+0	2.26E+1
HTP-c	CTUh	6.41E-10	8.00E-12	1.89E-11	6.68E-10	3.07E-12	1.32E-10	1.71E-13	-2.13E-10	5.91E-10
HTP-nc	CTUh	1.71E-8	2.68E-10	4.95E-10	1.79E-8	1.03E-10	2.91E-9	1.72E-11	-6.50E-9	1.44E-8
SQP	Pt	1.17E+1	2.37E-1	1.32E+0	1.32E+1	9.09E-2	6.84E-1	1.52E-2	-1.58E+1	-1.82E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.22E+0	3.97E-3	3.36E-1	2.56E+0	1.52E-3	7.77E-2	2.14E-4	-2.84E+0	-1.99E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.22E+0	3.97E-3	3.36E-1	2.56E+0	1.52E-3	7.77E-2	2.14E-4	-2.84E+0	-1.99E-1
PENRE	MJ	1.48E+1	2.94E-1	2.75E-1	1.54E+1	1.13E-1	1.18E+0	6.32E-3	-8.14E+0	8.52E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.48E+1	2.94E-1	2.75E-1	1.54E+1	1.13E-1	1.18E+0	6.32E-3	-8.14E+0	8.52E+0
PET	MJ	1.70E+1	2.98E-1	6.12E-1	1.79E+1	1.14E-1	1.25E+0	6.53E-3	-1.10E+1	8.32E+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	1.13E-2	3.13E-5	1.19E-2	2.33E-2	1.20E-5	1.15E-3	7.23E-6	-6.25E-3	1.82E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.75E-5	7.08E-7	3.71E-7	9.86E-5	2.72E-7	1.84E-6	7.34E-9	-6.83E-6	9.39E-5
NHWD	kg	9.49E-2	1.72E-2	2.72E-3	1.15E-1	6.59E-3	4.08E-2	2.63E-2	-2.95E-2	1.59E-1
RWD	kg	2.96E-5	1.88E-6	7.51E-7	3.22E-5	7.23E-7	4.27E-6	3.86E-8	-1.53E-5	2.19E-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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