Environmental Profile

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

Ecochain v3.5.80

Product:	3025656 - Gutter PVC Pipe Sand 80 L= 4 SG/CH
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	3.70E+0	1.21E-1	1.72E-1	4.00E+0	5.30E-2	1.52E+0	1.56E-2	-2.08E+0	3.51E+0
GWP-f	kg CO2 eq	3.79E+0	1.21E-1	1.36E-1	4.05E+0	5.29E-2	1.39E+0	1.56E-2	-2.06E+0	3.45E+0
GWP-b	kg CO2 eq	-1.01E-1	7.34E-5	3.57E-2	-6.52E-2	3.21E-5	1.33E-1	1.97E-5	-1.45E-2	5.35E-2
GWP-luluc	kg CO2 eq	1.03E-2	4.28E-5	1.22E-4	1.05E-2	1.87E-5	6.30E-4	4.17E-7	-1.36E-3	9.77E-3
ODP	kg CFC11 eq	2.05E-6	2.78E-8	1.77E-8	2.10E-6	1.22E-8	1.70E-7	6.09E-10	-1.04E-6	1.24E-6
AP	mol H+ eq	1.87E-2	6.88E-4	7.38E-4	2.02E-2	3.01E-4	2.92E-3	1.47E-5	-7.90E-3	1.55E-2
EP-fw	kg P eq	1.74E-4	9.94E-7	3.23E-6	1.79E-4	4.35E-7	2.09E-5	1.88E-8	-7.66E-5	1.23E-4
EP-m	kg N eq	3.11E-3	2.46E-4	2.18E-4	3.57E-3	1.08E-4	7.09E-4	9.05E-6	-1.37E-3	3.03E-3
EP-T	mol N eq	3.32E-2	2.71E-3	2.59E-3	3.85E-2	1.19E-3	7.82E-3	5.86E-5	-1.47E-2	3.29E-2
POCP	kg NMVOC eq	1.12E-2	7.76E-4	6.46E-4	1.26E-2	3.40E-4	2.35E-3	2.00E-5	-5.08E-3	1.02E-2
ADP-mm	kg Sb eq	2.38E-3	3.13E-6	2.47E-6	2.39E-3	1.37E-6	1.15E-5	1.46E-8	-4.23E-5	2.36E-3
ADP-f	MJ	9.50E+1	1.85E+0	1.90E+0	9.88E+1	8.12E-1	8.03E+0	4.43E-2	-5.04E+1	5.73E+1
WDP	m3 depriv.	6.28E+0	5.69E-3	3.89E+0	1.02E+1	2.49E-3	3.13E-1	2.73E-4	-2.99E+0	7.50E+0
PM	disease inc.	1.24E-7	1.09E-8	1.08E-8	1.46E-7	4.78E-9	3.65E-8	3.04E-10	-5.07E-8	1.37E-7
IR	kBq U-235 eq	2.08E-1	8.11E-3	5.51E-3	2.21E-1	3.55E-3	2.80E-2	2.03E-4	-9.65E-2	1.57E-1
ETP-fw	CTUe	8.35E+1	1.51E+0	1.72E+0	8.67E+1	6.59E-1	6.03E+1	6.65E-1	-2.93E+1	1.19E+2
HTP-c	CTUh	3.09E-9	5.36E-11	1.36E-10	3.28E-9	2.35E-11	8.89E-10	1.18E-12	-1.10E-9	3.10E-9
HTP-nc	CTUh	1.02E-7	1.80E-9	3.48E-9	1.07E-7	7.86E-10	2.12E-8	1.28E-10	-3.80E-8	9.10E-8
SQP	Pt	2.46E+1	1.59E+0	8.02E+0	3.42E+1	6.95E-1	5.00E+0	1.13E-1	-7.70E+0	3.23E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.50E+0	2.66E-2	2.05E+0	8.57E+0	1.17E-2	5.76E-1	1.61E-3	-2.65E+0	6.51E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.50E+0	2.66E-2	2.05E+0	8.57E+0	1.17E-2	5.76E-1	1.61E-3	-2.65E+0	6.51E+0
PENRE	MJ	1.02E+2	1.97E+0	2.06E+0	1.06E+2	8.62E-1	8.54E+0	4.70E-2	-5.42E+1	6.12E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.02E+2	1.97E+0	2.06E+0	1.06E+2	8.62E-1	8.54E+0	4.70E-2	-5.42E+1	6.12E+1
PET	MJ	1.08E+2	2.00E+0	4.10E+0	1.15E+2	8.74E-1	9.12E+0	4.86E-2	-5.69E+1	6.77E+1
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	6.96E-2	2.10E-4	9.11E-2	1.61E-1	9.19E-5	8.57E-3	5.42E-5	-3.13E-2	1.38E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.42E-4	4.74E-6	2.85E-6	3.49E-4	2.08E-6	1.29E-5	5.36E-8	-4.15E-5	3.23E-4
NHWD	kg	4.18E-1	1.15E-1	2.09E-2	5.54E-1	5.03E-2	2.96E-1	2.01E-1	-1.60E-1	9.42E-1
RWD	kg	1.81E-4	1.26E-5	5.76E-6	1.99E-4	5.52E-6	3.01E-5	2.89E-7	-8.51E-5	1.50E-4
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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