Environmental Profile

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

Ecochain v3.5.80

Product:	3025652 - Gutter PVC Pipe Sand 50 L= 2 PL
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	1.30E+0	4.49E-2	6.44E-2	1.41E+0	1.92E-2	7.14E-1	5.87E-3	-7.99E-1	1.35E+0
GWP-f	kg CO2 eq	1.47E+0	4.48E-2	5.07E-2	1.56E+0	1.92E-2	5.36E-1	5.87E-3	-7.93E-1	1.33E+0
GWP-b	kg CO2 eq	-1.67E-1	2.72E-5	1.37E-2	-1.53E-1	1.17E-5	1.78E-1	7.40E-6	-5.49E-3	1.99E-2
GWP-luluc	kg CO2 eq	1.32E-3	1.59E-5	4.96E-5	1.38E-3	6.80E-6	2.34E-4	1.56E-7	-5.34E-4	1.09E-3
ODP	kg CFC11 eq	7.83E-7	1.03E-8	6.62E-9	8.00E-7	4.43E-9	6.39E-8	2.24E-10	-3.95E-7	4.74E-7
AP	mol H+ eq	7.56E-3	2.55E-4	2.92E-4	8.11E-3	1.09E-4	1.10E-3	5.43E-6	-3.06E-3	6.27E-3
EP-fw	kg P eq	6.79E-5	3.69E-7	1.21E-6	6.95E-5	1.58E-7	7.82E-6	7.04E-9	-2.92E-5	4.82E-5
EP-m	kg N eq	1.21E-3	9.14E-5	8.52E-5	1.39E-3	3.92E-5	2.69E-4	3.33E-6	-5.39E-4	1.16E-3
EP-T	mol N eq	1.33E-2	1.01E-3	1.03E-3	1.53E-2	4.32E-4	2.96E-3	2.17E-5	-5.86E-3	1.29E-2
POCP	kg NMVOC eq	4.42E-3	2.88E-4	2.52E-4	4.96E-3	1.23E-4	8.85E-4	7.43E-6	-1.98E-3	4.00E-3
ADP-mm	kg Sb eq	9.56E-4	1.16E-6	1.02E-6	9.58E-4	4.97E-7	4.28E-6	5.43E-9	-1.61E-5	9.46E-4
ADP-f	MJ	3.65E+1	6.88E-1	7.06E-1	3.79E+1	2.95E-1	2.97E+0	1.63E-2	-1.92E+1	2.20E+1
WDP	m3 depriv.	2.42E+0	2.11E-3	1.41E+0	3.83E+0	9.05E-4	1.17E-1	1.07E-4	-1.13E+0	2.82E+0
PM	disease inc.	5.45E-8	4.05E-9	4.23E-9	6.28E-8	1.73E-9	1.36E-8	1.12E-10	-2.02E-8	5.80E-8
IR	kBq U-235 eq	8.17E-2	3.01E-3	2.01E-3	8.67E-2	1.29E-3	1.04E-2	7.49E-5	-3.67E-2	6.18E-2
ETP-fw	CTUe	3.33E+1	5.59E-1	6.86E-1	3.45E+1	2.40E-1	2.28E+1	2.52E-1	-1.16E+1	4.61E+1
HTP-c	CTUh	1.29E-9	1.99E-11	5.21E-11	1.36E-9	8.52E-12	3.42E-10	4.45E-13	-4.26E-10	1.29E-9
HTP-nc	CTUh	4.00E-8	6.66E-10	1.36E-9	4.20E-8	2.86E-10	7.98E-9	4.84E-11	-1.47E-8	3.57E-8
SQP	Pt	2.14E+1	5.89E-1	3.55E+0	2.55E+1	2.52E-1	1.84E+0	4.17E-2	-5.49E+0	2.22E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.28E+0	9.87E-3	9.05E-1	5.20E+0	4.23E-3	2.15E-1	5.99E-4	-1.52E+0	3.90E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.28E+0	9.87E-3	9.05E-1	5.20E+0	4.23E-3	2.15E-1	5.99E-4	-1.52E+0	3.90E+0
PENRE	MJ	3.92E+1	7.31E-1	7.63E-1	4.07E+1	3.13E-1	3.16E+0	1.73E-2	-2.07E+1	2.35E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.92E+1	7.31E-1	7.63E-1	4.07E+1	3.13E-1	3.16E+0	1.73E-2	-2.07E+1	2.35E+1
PET	MJ	4.35E+1	7.40E-1	1.67E+0	4.59E+1	3.17E-1	3.38E+0	1.79E-2	-2.22E+1	2.73E+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	2.73E-2	7.79E-5	3.31E-2	6.05E-2	3.34E-5	3.23E-3	2.00E-5	-1.19E-2	5.19E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.37E-4	1.76E-6	1.03E-6	1.40E-4	7.54E-7	4.81E-6	1.99E-8	-1.60E-5	1.29E-4
NHWD	kg	1.81E-1	4.26E-2	7.57E-3	2.31E-1	1.83E-2	1.12E-1	7.31E-2	-6.17E-2	3.72E-1
RWD	kg	7.15E-5	4.68E-6	2.09E-6	7.83E-5	2.01E-6	1.12E-5	1.06E-7	-3.24E-5	5.91E-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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