

Environmental Profile

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

Ecochain v3.5.80



Product: 3025676 - Gutter Bend 45° Sand 100 S/SP
 Unit: 1 Piece
 Manufacturer: Wavin - FR - Varennes

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



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.

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	☑	☑	☑	☑									

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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.27E-1	1.43E-2	1.79E-2	4.59E-1	5.61E-3	2.52E-1	1.77E-3	-2.40E-1	4.79E-1
GWP-f	kg CO2 eq	4.91E-1	1.43E-2	1.42E-2	5.20E-1	5.61E-3	1.72E-1	1.77E-3	-2.64E-1	4.36E-1
GWP-b	kg CO2 eq	-6.45E-2	8.69E-6	3.71E-3	-6.08E-2	3.40E-6	7.97E-2	2.17E-6	2.41E-2	4.30E-2
GWP-luluc	kg CO2 eq	5.92E-4	5.07E-6	1.25E-5	6.10E-4	1.98E-6	6.81E-5	4.88E-8	-3.63E-4	3.17E-4
ODP	kg CFC11 eq	2.29E-7	3.30E-9	1.85E-9	2.34E-7	1.29E-9	1.86E-8	6.59E-11	-1.21E-7	1.33E-7
AP	mol H+ eq	2.92E-3	8.16E-5	7.63E-5	3.07E-3	3.19E-5	3.28E-4	1.61E-6	-1.07E-3	2.37E-3
EP-fw	kg P eq	2.39E-5	1.18E-7	3.38E-7	2.43E-5	4.61E-8	2.27E-6	2.17E-9	-1.13E-5	1.54E-5
EP-m	kg N eq	4.53E-4	2.92E-5	2.26E-5	5.05E-4	1.14E-5	8.19E-5	9.64E-7	-1.99E-4	4.00E-4
EP-T	mol N eq	4.90E-3	3.22E-4	2.68E-4	5.49E-3	1.26E-4	9.02E-4	6.40E-6	-2.16E-3	4.37E-3
POCP	kg NMVOC eq	1.59E-3	9.19E-5	6.70E-5	1.75E-3	3.60E-5	2.70E-4	2.20E-6	-7.21E-4	1.34E-3
ADP-mm	kg Sb eq	5.42E-4	3.70E-7	2.54E-7	5.42E-4	1.45E-7	1.29E-6	1.64E-9	-5.10E-6	5.39E-4
ADP-f	MJ	1.15E+1	2.20E-1	1.99E-1	1.20E+1	8.61E-2	8.85E-1	4.82E-3	-6.19E+0	6.75E+0
WDP	m3 depriv.	7.45E-1	6.74E-4	4.08E-1	1.15E+0	2.64E-4	3.38E-2	4.11E-5	-3.76E-1	8.11E-1
PM	disease inc.	1.91E-8	1.29E-9	1.12E-9	2.15E-8	5.06E-10	4.12E-9	3.32E-11	-9.26E-9	1.69E-8
IR	kBq U-235 eq	2.69E-2	9.61E-4	5.78E-4	2.84E-2	3.76E-4	3.12E-3	2.20E-5	-1.29E-2	1.91E-2
ETP-fw	CTUe	1.62E+1	1.78E-1	1.78E-1	1.65E+1	6.99E-2	6.52E+0	7.15E-2	-5.46E+0	1.77E+1
HTP-c	CTUh	5.19E-10	6.35E-12	1.42E-11	5.39E-10	2.49E-12	1.08E-10	1.39E-13	-1.63E-10	4.86E-10
HTP-nc	CTUh	1.38E-8	2.13E-10	3.60E-10	1.43E-8	8.33E-11	2.35E-9	1.39E-11	-4.99E-9	1.18E-8
SQP	Pt	8.54E+0	1.88E-1	8.10E-1	9.54E+0	7.36E-2	5.50E-1	1.23E-2	-1.00E+1	1.53E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.64E+0	3.15E-3	2.07E-1	1.85E+0	1.23E-3	6.25E-2	1.73E-4	-1.80E+0	1.13E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.64E+0	3.15E-3	2.07E-1	1.85E+0	1.23E-3	6.25E-2	1.73E-4	-1.80E+0	1.13E-1
PENRE	MJ	1.24E+1	2.33E-1	2.15E-1	1.28E+1	9.14E-2	9.42E-1	5.12E-3	-6.67E+0	7.20E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.24E+1	2.33E-1	2.15E-1	1.28E+1	9.14E-2	9.42E-1	5.12E-3	-6.67E+0	7.20E+0
PET	MJ	1.40E+1	2.36E-1	4.22E-1	1.47E+1	9.26E-2	1.00E+0	5.29E-3	-8.47E+0	7.32E+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	9.40E-3	2.49E-5	9.56E-3	1.90E-2	9.74E-6	9.31E-4	5.85E-6	-4.56E-3	1.54E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.67E-5	5.62E-7	2.99E-7	7.76E-5	2.20E-7	1.47E-6	5.95E-9	-5.55E-6	7.37E-5
NHWD	kg	7.73E-2	1.36E-2	2.19E-3	9.31E-2	5.33E-3	3.35E-2	2.13E-2	-2.27E-2	1.31E-1
RWD	kg	2.38E-5	1.49E-6	6.05E-7	2.59E-5	5.85E-7	3.39E-6	3.12E-8	-1.16E-5	1.82E-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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