

Environmental Profile

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

Ecochain v3.5.71



Product: 3066583 - PVC-U Sewer Branch 45° 9"x4" S/S
 Unit: 1 piece
 Manufacturer: Wavin - UK - Chippenham - Verified

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 09-02-2023
 End of validity: 09-02-2028
 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 - UK - Chippenham - Verified (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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.33E+0	3.15E-1	6.67E-1	8.31E+0	9.76E-2	2.69E+0	3.06E-2	-4.08E+0	7.04E+0
GWP-f	kg CO2 eq	7.26E+0	3.15E-1	6.49E-1	8.22E+0	9.75E-2	2.69E+0	3.06E-2	-4.05E+0	6.99E+0
GWP-b	kg CO2 eq	6.36E-2	-6.76E-5	1.81E-2	8.16E-2	5.92E-5	-2.66E-3	3.85E-5	-2.85E-2	5.06E-2
GWP-luluc	kg CO2 eq	6.06E-3	2.08E-4	5.27E-4	6.79E-3	3.45E-5	1.20E-3	8.14E-7	-2.65E-3	5.38E-3
ODP	kg CFC11 eq	4.05E-6	6.41E-8	6.08E-8	4.17E-6	2.25E-8	3.29E-7	1.15E-9	-2.05E-6	2.47E-6
AP	mol H+ eq	3.37E-2	9.43E-3	3.45E-3	4.66E-2	5.56E-4	5.53E-3	2.80E-5	-1.54E-2	3.73E-2
EP-fw	kg P eq	3.32E-4	1.42E-6	8.93E-6	3.42E-4	8.03E-7	4.02E-5	3.67E-8	-1.51E-4	2.32E-4
EP-m	kg N eq	5.68E-3	2.34E-3	7.00E-4	8.72E-3	1.99E-4	1.33E-3	1.73E-5	-2.67E-3	7.60E-3
EP-T	mol N eq	6.19E-2	2.60E-2	7.57E-3	9.54E-2	2.19E-3	1.47E-2	1.12E-4	-2.83E-2	8.41E-2
POCP	kg NMVOC eq	2.10E-2	6.75E-3	3.41E-3	3.12E-2	6.26E-4	4.39E-3	3.83E-5	-9.85E-3	2.64E-2
ADP-mm	kg Sb eq	4.23E-3	2.91E-6	1.52E-5	4.24E-3	2.52E-6	2.18E-5	2.81E-8	-8.41E-5	4.19E-3
ADP-f	MJ	1.85E+2	4.11E+0	7.17E+0	1.97E+2	1.50E+0	1.51E+1	8.40E-2	-9.87E+1	1.15E+2
WDP	m3 depriv.	1.22E+1	6.75E-3	2.22E-1	1.25E+1	4.60E-3	6.05E-1	5.70E-4	-5.89E+0	7.18E+0
PM	disease inc.	2.20E-7	1.15E-8	2.34E-8	2.54E-7	8.81E-9	6.82E-8	5.78E-10	-9.78E-8	2.34E-7
IR	kBq U-235 eq	4.04E-1	1.77E-2	1.83E-2	4.40E-1	6.54E-3	5.31E-2	3.85E-4	-1.90E-1	3.10E-1
ETP-fw	CTUe	1.57E+2	2.72E+0	1.82E+1	1.78E+2	1.22E+0	1.18E+2	1.31E+0	-5.67E+1	2.42E+2
HTP-c	CTUh	5.64E-9	1.75E-10	7.13E-10	6.53E-9	4.33E-11	1.68E-9	2.33E-12	-2.16E-9	6.10E-9
HTP-nc	CTUh	1.81E-7	2.32E-9	4.16E-8	2.25E-7	1.45E-9	4.08E-8	2.52E-10	-7.48E-8	1.93E-7
SQP	Pt	2.39E+1	8.94E-1	2.39E+0	2.71E+1	1.28E+0	9.28E+0	2.15E-1	-1.05E+1	2.74E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.14E+0	3.12E-2	3.70E+1	4.62E+1	2.15E-2	1.10E+0	3.10E-3	-4.28E+0	4.30E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.14E+0	3.12E-2	3.70E+1	4.62E+1	2.15E-2	1.10E+0	3.10E-3	-4.28E+0	4.30E+1
PENRE	MJ	1.99E+2	4.36E+0	7.61E+0	2.11E+2	1.59E+0	1.61E+1	8.91E-2	-1.06E+2	1.22E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.99E+2	4.36E+0	7.61E+0	2.11E+2	1.59E+0	1.61E+1	8.91E-2	-1.06E+2	1.22E+2
PET	MJ	2.08E+2	4.39E+0	4.46E+1	2.57E+2	1.61E+0	1.72E+1	9.22E-2	-1.11E+2	1.65E+2
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	1.33E-1	2.42E-4	6.39E-3	1.40E-1	1.69E-4	1.66E-2	1.03E-4	-6.15E-2	9.53E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.55E-4	4.52E-6	7.07E-5	7.30E-4	3.83E-6	2.44E-5	1.02E-7	-8.18E-5	6.77E-4
NHWD	kg	7.13E-1	3.75E-2	1.44E-2	7.65E-1	9.28E-2	5.46E-1	3.72E-1	-3.14E-1	1.46E+0
RWD	kg	3.53E-4	2.85E-5	1.87E-5	4.00E-4	1.02E-5	5.65E-5	5.46E-7	-1.67E-4	3.00E-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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