

Environmental Profile

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

Ecochain v3.5.71



Product: 3066581 - PVC-U Sewer Branch 45° 9"x6" 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	☑	☑	☑	☑									

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	7.64E+0	3.32E-1	6.95E-1	8.67E+0	1.03E-1	2.79E+0	3.23E-2	-4.29E+0	7.31E+0
GWP-f	kg CO2 eq	7.57E+0	3.32E-1	6.76E-1	8.58E+0	1.03E-1	2.79E+0	3.23E-2	-4.26E+0	7.25E+0
GWP-b	kg CO2 eq	6.72E-2	-6.82E-5	1.89E-2	8.60E-2	6.23E-5	-2.82E-3	4.05E-5	-2.99E-2	5.34E-2
GWP-luluc	kg CO2 eq	6.29E-3	2.17E-4	5.49E-4	7.06E-3	3.63E-5	1.26E-3	8.53E-7	-2.76E-3	5.59E-3
ODP	kg CFC11 eq	4.21E-6	6.77E-8	6.34E-8	4.34E-6	2.36E-8	3.43E-7	1.21E-9	-2.14E-6	2.57E-6
AP	mol H+ eq	3.51E-2	9.85E-3	3.59E-3	4.85E-2	5.84E-4	5.79E-3	2.94E-5	-1.62E-2	3.87E-2
EP-fw	kg P eq	3.45E-4	1.51E-6	9.31E-6	3.56E-4	8.44E-7	4.20E-5	3.85E-8	-1.58E-4	2.41E-4
EP-m	kg N eq	5.92E-3	2.44E-3	7.29E-4	9.09E-3	2.09E-4	1.39E-3	1.81E-5	-2.80E-3	7.91E-3
EP-T	mol N eq	6.45E-2	2.71E-2	7.89E-3	9.95E-2	2.30E-3	1.54E-2	1.17E-4	-2.98E-2	8.75E-2
POCP	kg NMVOC eq	2.19E-2	7.05E-3	3.55E-3	3.25E-2	6.58E-4	4.61E-3	4.03E-5	-1.04E-2	2.74E-2
ADP-mm	kg Sb eq	4.39E-3	3.12E-6	1.58E-5	4.41E-3	2.65E-6	2.29E-5	2.95E-8	-8.75E-5	4.35E-3
ADP-f	MJ	1.94E+2	4.33E+0	7.47E+0	2.06E+2	1.57E+0	1.58E+1	8.82E-2	-1.04E+2	1.19E+2
WDP	m3 depriv.	1.27E+1	7.20E-3	2.32E-1	1.30E+1	4.83E-3	6.32E-1	5.96E-4	-6.17E+0	7.46E+0
PM	disease inc.	2.28E-7	1.23E-8	2.43E-8	2.64E-7	9.26E-9	7.16E-8	6.07E-10	-1.03E-7	2.43E-7
IR	kBq U-235 eq	4.19E-1	1.86E-2	1.91E-2	4.56E-1	6.88E-3	5.56E-2	4.04E-4	-1.98E-1	3.21E-1
ETP-fw	CTUe	1.63E+2	2.88E+0	1.89E+1	1.85E+2	1.28E+0	1.23E+2	1.36E+0	-5.92E+1	2.51E+2
HTP-c	CTUh	5.87E-9	1.84E-10	7.43E-10	6.80E-9	4.55E-11	1.77E-9	2.44E-12	-2.26E-9	6.36E-9
HTP-nc	CTUh	1.89E-7	2.48E-9	4.34E-8	2.35E-7	1.52E-9	4.27E-8	2.63E-10	-7.81E-8	2.01E-7
SQP	Pt	2.47E+1	9.79E-1	2.49E+0	2.82E+1	1.35E+0	9.75E+0	2.25E-1	-1.10E+1	2.86E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.66E+0	3.33E-2	3.86E+1	4.83E+1	2.26E-2	1.15E+0	3.26E-3	-4.47E+0	4.50E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.66E+0	3.33E-2	3.86E+1	4.83E+1	2.26E-2	1.15E+0	3.26E-3	-4.47E+0	4.50E+1
PENRE	MJ	2.08E+2	4.60E+0	7.93E+0	2.20E+2	1.67E+0	1.69E+1	9.36E-2	-1.12E+2	1.27E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.08E+2	4.60E+0	7.93E+0	2.20E+2	1.67E+0	1.69E+1	9.36E-2	-1.12E+2	1.27E+2
PET	MJ	2.17E+2	4.64E+0	4.65E+1	2.69E+2	1.69E+0	1.80E+1	9.68E-2	-1.17E+2	1.72E+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	1.39E-1	2.59E-4	6.66E-3	1.46E-1	1.78E-4	1.73E-2	1.08E-4	-6.44E-2	9.88E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.82E-4	4.86E-6	7.37E-5	7.61E-4	4.03E-6	2.55E-5	1.07E-7	-8.53E-5	7.05E-4
NHWD	kg	7.43E-1	4.26E-2	1.50E-2	8.00E-1	9.76E-2	5.74E-1	3.90E-1	-3.28E-1	1.53E+0
RWD	kg	3.64E-4	3.01E-5	1.95E-5	4.14E-4	1.07E-5	5.92E-5	5.73E-7	-1.75E-4	3.09E-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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