Environmental Profile

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

Ecochain v3.5.71

Product:	3079706 - Wavin PVCU Branch 90° BK 110x110 S/S
Unit:	1 piece
Manufacturer:	Wavin - UK - Chippenham - Verified

When specifying a PVC-U Soil system for your industrial and commercial project, you need a system that has been designed specifically for that environment. Wavin Solvent Soil is a PVC-U system that enables space saving and flexible installations for efficient removal of waste water.

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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.56E+0	6.76E-2	1.78E-1	1.81E+0	2.07E-2	5.75E-1	6.65E-3	-8.72E-1	1.54E+0
GWP-f	kg CO2 eq	1.55E+0	6.76E-2	1.74E-1	1.79E+0	2.06E-2	5.75E-1	6.65E-3	-8.65E-1	1.53E+0
GWP-b	kg CO2 eq	1.16E-2	-1.02E-5	3.65E-3	1.52E-2	1.25E-5	-5.81E-4	8.17E-6	-5.96E-3	8.68E-3
GWP-luluc	kg CO2 eq	1.25E-3	4.29E-5	1.60E-4	1.45E-3	7.30E-6	2.45E-4	1.72E-7	-5.48E-4	1.16E-3
ODP	kg CFC11 eq	8.23E-7	1.39E-8	1.44E-8	8.51E-7	4.76E-9	6.60E-8	2.43E-10	-4.23E-7	5.00E-7
AP	mol H+ eq	7.20E-3	1.90E-3	9.70E-4	1.01E-2	1.18E-4	1.14E-3	5.91E-6	-3.26E-3	8.07E-3
EP-fw	kg P eq	6.85E-5	3.23E-7	2.46E-6	7.12E-5	1.70E-7	8.16E-6	7.75E-9	-3.12E-5	4.83E-5
EP-m	kg N eq	1.20E-3	4.73E-4	1.82E-4	1.86E-3	4.21E-5	2.76E-4	3.89E-6	-5.63E-4	1.62E-3
EP-T	mol N eq	1.31E-2	5.26E-3	2.00E-3	2.04E-2	4.64E-4	3.04E-3	2.36E-5	-5.99E-3	1.79E-2
POCP	kg NMVOC eq	4.61E-3	1.37E-3	8.38E-4	6.82E-3	1.33E-4	9.12E-4	8.14E-6	-2.10E-3	5.77E-3
ADP-mm	kg Sb eq	8.59E-4	7.10E-7	4.63E-6	8.64E-4	5.34E-7	4.48E-6	5.93E-9	-1.73E-5	8.52E-4
ADP-f	MJ	4.09E+1	8.93E-1	1.93E+0	4.38E+1	3.17E-1	3.12E+0	1.77E-2	-2.13E+1	2.59E+1
WDP	m3 depriv.	2.49E+0	1.58E-3	5.61E-2	2.55E+0	9.72E-4	1.22E-1	1.19E-4	-1.23E+0	1.45E+0
PM	disease inc.	5.03E-8	2.75E-9	6.71E-9	5.98E-8	1.86E-9	1.42E-8	1.22E-10	-2.08E-8	5.51E-8
IR	kBq U-235 eq	8.93E-2	3.84E-3	4.47E-3	9.76E-2	1.38E-3	1.09E-2	8.16E-5	-3.94E-2	7.06E-2
ETP-fw	CTUe	3.25E+1	6.04E-1	5.32E+0	3.84E+1	2.57E-1	2.35E+1	2.60E-1	-1.17E+1	5.07E+1
HTP-c	CTUh	1.15E-9	3.69E-11	2.09E-10	1.40E-9	9.15E-12	3.51E-10	4.89E-13	-4.48E-10	1.31E-9
HTP-nc	CTUh	3.68E-8	5.37E-10	1.00E-8	4.73E-8	3.07E-10	8.30E-9	5.05E-11	-1.55E-8	4.05E-8
SQP	Pt	5.19E+0	2.45E-1	6.87E-1	6.12E+0	2.71E-1	1.94E+0	4.53E-2	-2.18E+0	6.21E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.92E+0	7.33E-3	1.14E+1	1.34E+1	4.54E-3	2.25E-1	6.61E-4	-8.89E-1	1.27E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.92E+0	7.33E-3	1.14E+1	1.34E+1	4.54E-3	2.25E-1	6.61E-4	-8.89E-1	1.27E+1
PENRE	MJ	4.39E+1	9.48E-1	2.05E+0	4.69E+1	3.36E-1	3.32E+0	1.88E-2	-2.29E+1	2.76E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.39E+1	9.48E-1	2.05E+0	4.69E+1	3.36E-1	3.32E+0	1.88E-2	-2.29E+1	2.76E+1
PET	MJ	4.58E+1	9.55E-1	1.35E+1	6.03E+1	3.41E-1	3.55E+0	1.95E-2	-2.38E+1	4.03E+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	2.79E-2	5.70E-5	1.67E-3	2.97E-2	3.58E-5	3.36E-3	2.17E-5	-1.29E-2	2.02E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.31E-4	1.10E-6	1.47E-5	1.46E-4	8.10E-7	5.05E-6	2.16E-8	-1.71E-5	1.35E-4
NHWD	kg	1.46E-1	1.24E-2	3.06E-3	1.62E-1	1.96E-2	1.15E-1	7.85E-2	-6.51E-2	3.10E-1
RWD	kg	8.22E-5	6.18E-6	3.88E-6	9.23E-5	2.15E-6	1.17E-5	1.15E-7	-3.47E-5	7.15E-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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