Environmental Profile

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

Ecochain v3.5.71

Product:	3079702 - Wavin PVCU Access Bend 90° BK 110 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	1.47E+0	6.29E-2	1.74E-1	1.70E+0	1.94E-2	5.40E-1	6.18E-3	-8.17E-1	1.45E+0
GWP-f	kg CO2 eq	1.45E+0	6.29E-2	1.70E-1	1.69E+0	1.94E-2	5.41E-1	6.18E-3	-8.11E-1	1.44E+0
GWP-b	kg CO2 eq	1.16E-2	-1.12E-5	3.43E-3	1.50E-2	1.18E-5	-5.39E-4	7.65E-6	-5.63E-3	8.83E-3
GWP-luluc	kg CO2 eq	1.19E-3	4.05E-5	1.58E-4	1.39E-3	6.86E-6	2.34E-4	1.63E-7	-5.20E-4	1.11E-3
ODP	kg CFC11 eq	7.88E-7	1.29E-8	1.39E-8	8.15E-7	4.47E-9	6.33E-8	2.28E-10	-4.02E-7	4.81E-7
AP	mol H+ eq	6.76E-3	1.81E-3	9.50E-4	9.52E-3	1.10E-4	1.08E-3	5.56E-6	-3.06E-3	7.65E-3
EP-fw	kg P eq	6.50E-5	2.93E-7	2.41E-6	6.77E-5	1.60E-7	7.78E-6	7.31E-9	-2.96E-5	4.60E-5
EP-m	kg N eq	1.13E-3	4.51E-4	1.76E-4	1.76E-3	3.95E-5	2.61E-4	3.54E-6	-5.30E-4	1.54E-3
EP-T	mol N eq	1.24E-2	5.01E-3	1.94E-3	1.93E-2	4.35E-4	2.88E-3	2.22E-5	-5.63E-3	1.70E-2
POCP	kg NMVOC eq	4.28E-3	1.30E-3	8.09E-4	6.40E-3	1.24E-4	8.64E-4	7.64E-6	-1.97E-3	5.42E-3
ADP-mm	kg Sb eq	8.69E-4	6.27E-7	4.57E-6	8.74E-4	5.02E-7	4.26E-6	5.59E-9	-1.65E-5	8.62E-4
ADP-f	MJ	3.80E+1	8.26E-1	1.88E+0	4.07E+1	2.98E-1	2.96E+0	1.67E-2	-1.98E+1	2.41E+1
WDP	m3 depriv.	2.37E+0	1.42E-3	5.44E-2	2.43E+0	9.13E-4	1.17E-1	1.16E-4	-1.16E+0	1.38E+0
PM	disease inc.	4.66E-8	2.45E-9	6.59E-9	5.56E-8	1.75E-9	1.34E-8	1.15E-10	-1.95E-8	5.14E-8
IR	kBq U-235 eq	8.34E-2	3.55E-3	4.32E-3	9.12E-2	1.30E-3	1.04E-2	7.65E-5	-3.74E-2	6.56E-2
ETP-fw	CTUe	3.13E+1	5.54E-1	5.23E+0	3.71E+1	2.42E-1	2.26E+1	2.50E-1	-1.11E+1	4.90E+1
HTP-c	CTUh	1.11E-9	3.46E-11	2.05E-10	1.35E-9	8.60E-12	3.34E-10	4.63E-13	-4.25E-10	1.27E-9
HTP-nc	CTUh	3.54E-8	4.85E-10	9.66E-9	4.55E-8	2.88E-10	7.92E-9	4.84E-11	-1.47E-8	3.91E-8
SQP	Pt	4.84E+0	2.07E-1	6.75E-1	5.73E+0	2.55E-1	1.83E+0	4.26E-2	-2.06E+0	5.79E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.80E+0	6.57E-3	1.13E+1	1.31E+1	4.27E-3	2.14E-1	6.16E-4	-8.42E-1	1.25E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.80E+0	6.57E-3	1.13E+1	1.31E+1	4.27E-3	2.14E-1	6.16E-4	-8.42E-1	1.25E+1
PENRE	MJ	4.07E+1	8.77E-1	2.00E+0	4.36E+1	3.16E-1	3.15E+0	1.77E-2	-2.14E+1	2.57E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.07E+1	8.77E-1	2.00E+0	4.36E+1	3.16E-1	3.15E+0	1.77E-2	-2.14E+1	2.57E+1
PET	MJ	4.25E+1	8.83E-1	1.33E+1	5.67E+1	3.20E-1	3.37E+0	1.83E-2	-2.22E+1	3.82E+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	2.63E-2	5.11E-5	1.63E-3	2.80E-2	3.37E-5	3.20E-3	2.04E-5	-1.21E-2	1.91E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.32E-4	9.72E-7	1.38E-5	1.47E-4	7.61E-7	4.78E-6	2.04E-8	-1.62E-5	1.36E-4
NHWD	kg	1.39E-1	9.81E-3	2.90E-3	1.51E-1	1.84E-2	1.09E-1	7.38E-2	-6.17E-2	2.90E-1
RWD	kg	7.60E-5	5.72E-6	3.67E-6	8.54E-5	2.02E-6	1.11E-5	1.08E-7	-3.29E-5	6.56E-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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