

Environmental Profile

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

Ecochain v3.5.71



Product: 3041826 - RainChannel Garage Pack BK L=1
 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	1.11E+1	2.25E-1	2.44E+0	1.38E+1	1.47E-1	4.32E+0	6.90E-2	-6.81E+0	1.15E+1
GWP-f	kg CO2 eq	1.11E+1	2.24E-1	2.42E+0	1.37E+1	1.46E-1	4.32E+0	6.90E-2	-6.79E+0	1.15E+1
GWP-b	kg CO2 eq	4.75E-2	1.36E-4	2.31E-2	7.08E-2	8.89E-5	-5.87E-3	6.02E-5	-2.36E-2	4.15E-2
GWP-luluc	kg CO2 eq	2.75E-3	7.95E-5	2.64E-3	5.47E-3	5.18E-5	8.22E-4	1.16E-6	-1.31E-3	5.04E-3
ODP	kg CFC11 eq	5.10E-7	5.17E-8	1.58E-7	7.19E-7	3.37E-8	1.07E-7	1.73E-9	-2.55E-7	6.06E-7
AP	mol H+ eq	4.03E-2	1.28E-3	1.45E-2	5.61E-2	8.34E-4	4.50E-3	4.12E-5	-1.90E-2	4.25E-2
EP-fw	kg P eq	1.56E-4	1.85E-6	3.56E-5	1.93E-4	1.20E-6	2.37E-5	5.33E-8	-7.42E-5	1.44E-4
EP-m	kg N eq	6.58E-3	4.58E-4	2.37E-3	9.41E-3	2.98E-4	1.31E-3	2.70E-5	-3.35E-3	7.69E-3
EP-T	mol N eq	7.36E-2	5.05E-3	2.69E-2	1.06E-1	3.29E-3	1.44E-2	1.67E-4	-3.71E-2	8.63E-2
POCP	kg NMVOC eq	3.42E-2	1.44E-3	9.86E-3	4.55E-2	9.40E-4	4.56E-3	6.28E-5	-1.71E-2	3.39E-2
ADP-mm	kg Sb eq	1.25E-4	5.80E-6	7.67E-5	2.07E-4	3.79E-6	1.78E-5	4.14E-8	-4.46E-5	1.84E-4
ADP-f	MJ	4.01E+2	3.44E+0	2.69E+1	4.32E+2	2.25E+0	1.43E+1	1.26E-1	-2.13E+2	2.35E+2
WDP	m3 depriv.	7.46E+0	1.06E-2	6.98E-1	8.17E+0	6.90E-3	2.80E-1	5.78E-4	-3.68E+0	4.77E+0
PM	disease inc.	4.01E-7	2.03E-8	1.03E-7	5.25E-7	1.32E-8	7.41E-8	8.68E-10	-1.58E-7	4.54E-7
IR	kBq U-235 eq	2.81E-1	1.51E-2	5.19E-2	3.48E-1	9.82E-3	4.30E-2	5.86E-4	-9.89E-2	3.03E-1
ETP-fw	CTUe	6.38E+1	2.80E+0	8.39E+1	1.50E+2	1.82E+0	1.61E+1	1.06E-1	-2.63E+1	1.42E+2
HTP-c	CTUh	2.37E-9	9.96E-11	3.28E-9	5.76E-9	6.49E-11	1.92E-9	3.04E-12	-1.13E-9	6.62E-9
HTP-nc	CTUh	6.86E-8	3.33E-9	1.13E-7	1.85E-7	2.18E-9	2.39E-8	6.77E-11	-3.18E-8	1.79E-7
SQP	Pt	1.49E+1	2.95E+0	1.06E+1	2.84E+1	1.92E+0	1.14E+1	3.24E-1	-5.72E+0	3.63E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.48E+0	4.94E-2	1.92E+2	1.98E+2	3.22E-2	7.04E-1	4.92E-3	-2.64E+0	1.96E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.48E+0	4.94E-2	1.92E+2	1.98E+2	3.22E-2	7.04E-1	4.92E-3	-2.64E+0	1.96E+2
PENRE	MJ	4.30E+2	3.66E+0	2.85E+1	4.63E+2	2.39E+0	1.52E+1	1.34E-1	-2.30E+2	2.50E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.30E+2	3.66E+0	2.85E+1	4.63E+2	2.39E+0	1.52E+1	1.34E-1	-2.30E+2	2.50E+2
PET	MJ	4.36E+2	3.71E+0	2.21E+2	6.61E+2	2.42E+0	1.59E+1	1.39E-1	-2.33E+2	4.46E+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	1.11E-1	3.90E-4	2.22E-2	1.34E-1	2.54E-4	8.25E-3	1.56E-4	-5.51E-2	8.76E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.71E-5	8.81E-6	1.05E-4	1.61E-4	5.75E-6	2.32E-5	1.52E-7	-5.01E-5	1.40E-4
NHWD	kg	3.90E-1	2.13E-1	2.43E-2	6.27E-1	1.39E-1	7.02E-1	5.57E-1	-1.64E-1	1.86E+0
RWD	kg	3.12E-4	2.34E-5	2.79E-5	3.63E-4	1.53E-5	5.45E-5	8.25E-7	-8.91E-5	3.45E-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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