

Environmental Profile

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

Ecochain v3.5.71



Product: 3032497 - RainChannel PP c/w PP Grate 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	3.68E+0	7.35E-2	8.06E-1	4.56E+0	4.82E-2	1.42E+0	2.27E-2	-2.25E+0	3.79E+0
GWP-f	kg CO2 eq	3.66E+0	7.34E-2	7.97E-1	4.53E+0	4.82E-2	1.42E+0	2.27E-2	-2.25E+0	3.78E+0
GWP-b	kg CO2 eq	1.51E-2	4.46E-5	7.62E-3	2.27E-2	2.93E-5	-1.93E-3	1.98E-5	-7.84E-3	1.30E-2
GWP-luluc	kg CO2 eq	9.03E-4	2.60E-5	8.70E-4	1.80E-3	1.71E-5	2.71E-4	3.81E-7	-4.33E-4	1.65E-3
ODP	kg CFC11 eq	1.69E-7	1.69E-8	5.19E-8	2.38E-7	1.11E-8	3.52E-8	5.70E-10	-8.39E-8	2.01E-7
AP	mol H+ eq	1.33E-2	4.18E-4	4.76E-3	1.85E-2	2.75E-4	1.48E-3	1.36E-5	-6.29E-3	1.40E-2
EP-fw	kg P eq	5.12E-5	6.04E-7	1.17E-5	6.35E-5	3.97E-7	7.81E-6	1.75E-8	-2.46E-5	4.71E-5
EP-m	kg N eq	2.17E-3	1.50E-4	7.82E-4	3.11E-3	9.82E-5	4.31E-4	8.88E-6	-1.11E-3	2.53E-3
EP-T	mol N eq	2.43E-2	1.65E-3	8.87E-3	3.48E-2	1.08E-3	4.74E-3	5.51E-5	-1.23E-2	2.84E-2
POCP	kg NMVOC eq	1.13E-2	4.71E-4	3.25E-3	1.50E-2	3.09E-4	1.50E-3	2.07E-5	-5.68E-3	1.12E-2
ADP-mm	kg Sb eq	4.13E-5	1.90E-6	2.53E-5	6.84E-5	1.25E-6	5.86E-6	1.36E-8	-1.48E-5	6.08E-5
ADP-f	MJ	1.33E+2	1.13E+0	8.85E+0	1.43E+2	7.40E-1	4.70E+0	4.16E-2	-7.08E+1	7.74E+1
WDP	m3 depriv.	2.47E+0	3.46E-3	2.30E-1	2.70E+0	2.27E-3	9.22E-2	1.90E-4	-1.22E+0	1.57E+0
PM	disease inc.	1.33E-7	6.63E-9	3.39E-8	1.73E-7	4.35E-9	2.44E-8	2.86E-10	-5.26E-8	1.50E-7
IR	kBq U-235 eq	9.27E-2	4.92E-3	1.71E-2	1.15E-1	3.23E-3	1.42E-2	1.93E-4	-3.28E-2	9.95E-2
ETP-fw	CTUe	2.10E+1	9.15E-1	2.76E+1	4.96E+1	6.01E-1	5.30E+0	3.48E-2	-8.73E+0	4.68E+1
HTP-c	CTUh	7.82E-10	3.26E-11	1.08E-9	1.90E-9	2.14E-11	6.30E-10	1.00E-12	-3.73E-10	2.18E-9
HTP-nc	CTUh	2.26E-8	1.09E-9	3.72E-8	6.09E-8	7.16E-10	7.88E-9	2.23E-11	-1.06E-8	5.90E-8
SQP	Pt	4.88E+0	9.64E-1	3.48E+0	9.33E+0	6.33E-1	3.75E+0	1.07E-1	-1.90E+0	1.19E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.80E+0	1.62E-2	6.34E+1	6.52E+1	1.06E-2	2.32E-1	1.62E-3	-8.76E-1	6.46E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.80E+0	1.62E-2	6.34E+1	6.52E+1	1.06E-2	2.32E-1	1.62E-3	-8.76E-1	6.46E+1
PENRE	MJ	1.42E+2	1.20E+0	9.39E+0	1.53E+2	7.85E-1	5.00E+0	4.41E-2	-7.63E+1	8.25E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.42E+2	1.20E+0	9.39E+0	1.53E+2	7.85E-1	5.00E+0	4.41E-2	-7.63E+1	8.25E+1
PET	MJ	1.44E+2	1.21E+0	7.28E+1	2.18E+2	7.96E-1	5.24E+0	4.57E-2	-7.71E+1	1.47E+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	3.68E-2	1.28E-4	7.33E-3	4.42E-2	8.37E-5	2.71E-3	5.13E-5	-1.83E-2	2.88E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.55E-5	2.88E-6	3.47E-5	5.31E-5	1.89E-6	7.62E-6	4.99E-8	-1.65E-5	4.62E-5
NHWD	kg	1.28E-1	6.98E-2	8.01E-3	2.06E-1	4.59E-2	2.31E-1	1.83E-1	-5.44E-2	6.12E-1
RWD	kg	1.03E-4	7.66E-6	9.20E-6	1.20E-4	5.03E-6	1.79E-5	2.72E-7	-2.95E-5	1.14E-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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