

Environmental Profile

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

Ecochain v3.5.80



Product: 3004588 - PVC Hanging Gutter GY PVC 5" Connector
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 08-06-2023
End of validity: 08-06-2028
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 - PL -Buk - Extra products (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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.80E-1	4.54E-3	1.45E-4	2.85E-1	3.63E-3	1.95E-1	1.16E-3	-1.60E-1	3.25E-1
GWP-f	kg CO2 eq	3.43E-1	4.53E-3	1.46E-4	3.47E-1	3.63E-3	1.16E-1	1.16E-3	-1.86E-1	2.82E-1
GWP-b	kg CO2 eq	-6.32E-2	2.75E-6	-1.54E-6	-6.32E-2	2.20E-6	7.88E-2	1.45E-6	2.69E-2	4.25E-2
GWP-luluc	kg CO2 eq	4.58E-4	1.60E-6	1.49E-7	4.60E-4	1.28E-6	4.62E-5	3.07E-8	-3.27E-4	1.80E-4
ODP	kg CFC11 eq	1.60E-7	1.04E-9	8.26E-12	1.61E-7	8.36E-10	1.29E-8	4.30E-11	-8.19E-8	9.28E-8
AP	mol H+ eq	1.66E-3	2.58E-5	1.47E-6	1.69E-3	2.07E-5	2.26E-4	1.05E-6	-7.85E-4	1.15E-3
EP-fw	kg P eq	1.62E-5	3.73E-8	8.24E-9	1.62E-5	2.99E-8	1.55E-6	1.38E-9	-8.59E-6	9.20E-6
EP-m	kg N eq	3.12E-4	9.24E-6	1.55E-7	3.22E-4	7.40E-6	5.70E-5	6.45E-7	-1.50E-4	2.37E-4
EP-T	mol N eq	3.36E-3	1.02E-4	1.85E-6	3.46E-3	8.15E-5	6.28E-4	4.18E-6	-1.64E-3	2.53E-3
POCP	kg NMVOC eq	1.08E-3	2.91E-5	6.28E-7	1.11E-3	2.33E-5	1.87E-4	1.44E-6	-5.39E-4	7.84E-4
ADP-mm	kg Sb eq	2.97E-4	1.17E-7	1.97E-8	2.97E-4	9.39E-8	8.90E-7	1.05E-9	-3.52E-6	2.95E-4
ADP-f	MJ	8.09E+0	6.96E-2	1.36E-3	8.16E+0	5.57E-2	6.00E-1	3.14E-3	-4.30E+0	4.52E+0
WDP	m3 depriv.	4.92E-1	2.14E-4	5.22E-5	4.93E-1	1.71E-4	2.31E-2	2.19E-5	-2.67E-1	2.49E-1
PM	disease inc.	1.30E-8	4.09E-10	9.08E-12	1.34E-8	3.28E-10	2.82E-9	2.16E-11	-7.59E-9	8.97E-9
IR	kBq U-235 eq	1.82E-2	3.04E-4	1.02E-6	1.85E-2	2.43E-4	2.14E-3	1.44E-5	-9.40E-3	1.15E-2
ETP-fw	CTUe	1.16E+1	5.65E-2	1.21E-2	1.17E+1	4.52E-2	4.52E+0	4.95E-2	-4.55E+0	1.17E+1
HTP-c	CTUh	3.14E-10	2.01E-12	6.17E-13	3.17E-10	1.61E-12	7.01E-11	8.79E-14	-1.23E-10	2.66E-10
HTP-nc	CTUh	9.15E-9	6.73E-11	1.57E-11	9.23E-9	5.39E-11	1.61E-9	9.52E-12	-3.50E-9	7.40E-9
SQP	Pt	7.79E+0	5.95E-2	2.24E-3	7.85E+0	4.77E-2	3.68E-1	8.04E-3	-1.01E+1	-1.82E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.21E+0	9.98E-4	2.40E-2	2.23E+0	7.99E-4	4.25E-2	1.17E-4	-1.77E+0	5.03E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.21E+0	9.98E-4	2.40E-2	2.23E+0	7.99E-4	4.25E-2	1.17E-4	-1.77E+0	5.03E-1
PENRE	MJ	8.68E+0	7.39E-2	1.44E-3	8.76E+0	5.91E-2	6.39E-1	3.33E-3	-4.63E+0	4.83E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.68E+0	7.39E-2	1.44E-3	8.76E+0	5.91E-2	6.39E-1	3.33E-3	-4.63E+0	4.83E+0
PET	MJ	1.09E+1	7.49E-2	2.55E-2	1.10E+1	5.99E-2	6.81E-1	3.45E-3	-6.40E+0	5.33E+0
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	5.93E-3	7.87E-6	1.46E-6	5.94E-3	6.30E-6	6.38E-4	3.84E-6	-3.47E-3	3.12E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.34E-5	1.78E-7	2.73E-13	4.36E-5	1.42E-7	1.00E-6	3.84E-9	-4.04E-6	4.07E-5
NHWD	kg	3.80E-2	4.31E-3	1.05E-6	4.23E-2	3.45E-3	2.25E-2	1.38E-2	-1.68E-2	6.52E-2
RWD	kg	1.62E-5	4.73E-7	1.10E-13	1.67E-5	3.79E-7	2.33E-6	2.04E-8	-8.56E-6	1.08E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777