Environmental Profile

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

Ecochain v3.5.80

Product:	3043948 - PP Adaptor GY 75
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

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	1.51E-1	9.02E-4	1.45E-4	1.52E-1	1.90E-3	2.33E-1	1.03E-3	-1.13E-1	2.75E-1
GWP-f	kg CO2 eq	2.49E-1	9.01E-4	1.46E-4	2.50E-1	1.90E-3	1.28E-1	1.03E-3	-1.29E-1	2.52E-1
GWP-b	kg CO2 eq	-9.80E-2	5.47E-7	-1.54E-6	-9.80E-2	1.15E-6	1.05E-1	9.41E-7	1.63E-2	2.31E-2
GWP-luluc	kg CO2 eq	2.50E-4	3.19E-7	1.49E-7	2.51E-4	6.71E-7	1.00E-5	1.84E-8	-1.77E-4	8.49E-5
ODP	kg CFC11 eq	2.60E-8	2.08E-10	8.26E-12	2.62E-8	4.37E-10	1.69E-9	2.66E-11	-9.95E-9	1.84E-8
AP	mol H+ eq	1.15E-3	5.13E-6	1.47E-6	1.16E-3	1.08E-5	7.34E-5	6.43E-7	-4.07E-4	8.35E-4
EP-fw	kg P eq	6.84E-6	7.42E-9	8.24E-9	6.86E-6	1.56E-8	3.03E-7	8.45E-10	-3.04E-6	4.14E-6
EP-m	kg N eq	2.11E-4	1.84E-6	1.55E-7	2.13E-4	3.86E-6	2.34E-5	6.81E-7	-8.75E-5	1.53E-4
EP-T	mol N eq	2.34E-3	2.02E-5	1.85E-6	2.36E-3	4.26E-5	2.58E-4	2.59E-6	-9.95E-4	1.67E-3
POCP	kg NMVOC eq	9.68E-4	5.79E-6	6.28E-7	9.74E-4	1.22E-5	7.69E-5	9.63E-7	-3.79E-4	6.85E-4
ADP-mm	kg Sb eq	3.20E-5	2.33E-8	1.97E-8	3.20E-5	4.91E-8	2.55E-7	6.42E-10	-1.79E-6	3.06E-5
ADP-f	MJ	7.22E+0	1.38E-2	1.36E-3	7.23E+0	2.91E-2	1.90E-1	1.95E-3	-3.23E+0	4.22E+0
WDP	m3 depriv.	1.49E-1	4.25E-5	5.22E-5	1.49E-1	8.93E-5	4.08E-3	9.90E-6	-7.00E-2	8.35E-2
PM	disease inc.	1.33E-8	8.13E-11	9.08E-12	1.34E-8	1.71E-10	1.05E-9	1.34E-11	-5.29E-9	9.37E-9
IR	kBq U-235 eq	1.08E-2	6.05E-5	1.02E-6	1.09E-2	1.27E-4	6.08E-4	9.15E-6	-3.09E-3	8.51E-3
ETP-fw	CTUe	5.39E+0	1.12E-2	1.21E-2	5.42E+0	2.36E-2	3.37E-1	2.43E-3	-2.06E+0	3.72E+0
HTP-c	CTUh	1.74E-10	4.00E-13	6.17E-13	1.75E-10	8.41E-13	2.67E-11	4.91E-14	-6.05E-11	1.42E-10
HTP-nc	CTUh	3.26E-9	1.34E-11	1.57E-11	3.29E-9	2.82E-11	3.59E-10	1.25E-12	-6.82E-10	2.99E-9
SQP	Pt	9.55E+0	1.18E-2	2.24E-3	9.56E+0	2.49E-2	1.45E-1	4.98E-3	-9.90E+0	-1.64E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.20E+0	1.98E-4	2.40E-2	2.22E+0	4.18E-4	8.97E-3	7.99E-5	-1.59E+0	6.36E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.20E+0	1.98E-4	2.40E-2	2.22E+0	4.18E-4	8.97E-3	7.99E-5	-1.59E+0	6.36E-1
PENRE	MJ	7.73E+0	1.47E-2	1.44E-3	7.74E+0	3.09E-2	2.03E-1	2.07E-3	-3.49E+0	4.49E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.73E+0	1.47E-2	1.44E-3	7.74E+0	3.09E-2	2.03E-1	2.07E-3	-3.49E+0	4.49E+0
PET	MJ	9.92E+0	1.49E-2	2.55E-2	9.97E+0	3.13E-2	2.12E-1	2.15E-3	-5.09E+0	5.12E+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	3.06E-3	1.57E-6	1.46E-6	3.06E-3	3.29E-6	1.95E-4	2.41E-6	-1.40E-3	1.86E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.14E-6	3.54E-8	2.73E-13	3.18E-6	7.44E-8	3.79E-7	2.34E-9	-2.18E-6	1.45E-6
NHWD	kg	2.20E-2	8.57E-4	1.05E-6	2.28E-2	1.80E-3	1.09E-2	8.55E-3	-7.43E-3	3.66E-2
RWD	kg	1.30E-5	9.41E-8	1.10E-13	1.31E-5	1.98E-7	7.88E-7	1.28E-8	-3.19E-6	1.09E-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