Environmental Profile

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

Ecochain v4.3.1

Product:	3051090 - PPr Adaptor M.Metal Th.Soc. WT 90x3"
Unit:	1 piece
Manufacturer:	Wavin - TR - Adana
Location:	Güzelevler Mahallesi
Address:	Girne Bulvarı 294 01321 Adana Turkey

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	04-10-2022
End of validity:	04-10-2027
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 - TR - Adana (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-f** = EF Resource use, fossils [MJ]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **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	7.59E+0	1.01E-1	2.87E-2	7.72E+0	1.01E-1	9.32E-1	1.29E-2	-2.10E+0	6.67E+0
GWP-f	kg CO2 eq	7.57E+0	1.01E-1	2.77E-2	7.70E+0	1.01E-1	8.53E-1	1.29E-2	-2.15E+0	6.51E+0
GWP-b	kg CO2 eq	5.86E-3	-1.40E-6	9.68E-4	6.82E-3	6.15E-5	7.87E-2	1.29E-5	6.23E-2	1.48E-1
GWP-luluc	kg CO2 eq	1.12E-2	5.69E-5	1.69E-5	1.12E-2	3.58E-5	2.00E-4	6.24E-7	-3.82E-3	7.65E-3
ODP	kg CFC11 eq	4.56E-7	2.10E-8	2.22E-9	4.79E-7	2.33E-8	2.90E-8	9.21E-10	-1.49E-7	3.83E-7
AP	mol H+ eq	5.93E-1	2.24E-3	1.76E-4	5.95E-1	5.77E-4	1.49E-3	2.15E-5	-4.62E-2	5.51E-1
EP-fw	kg P eq	4.75E-3	6.26E-7	2.21E-6	4.75E-3	8.33E-7	7.69E-6	2.62E-8	-3.91E-4	4.37E-3
EP-m	kg N eq	3.05E-2	5.73E-4	6.14E-5	3.11E-2	2.06E-4	4.01E-4	9.46E-6	-5.32E-3	2.64E-2
EP-T	mol N eq	4.47E-1	6.36E-3	4.16E-4	4.53E-1	2.28E-3	4.49E-3	8.32E-5	-7.45E-2	3.86E-1
POCP	kg NMVOC eq	1.20E-1	1.67E-3	1.36E-4	1.22E-1	6.50E-4	1.35E-3	2.65E-5	-1.77E-2	1.06E-1
ADP-f	MJ	1.10E+2	1.37E+0	2.75E-1	1.12E+2	1.55E+0	3.34E+0	6.40E-2	-3.97E+1	7.73E+1
ADP-mm	kg Sb eq	3.77E-2	1.44E-6	2.20E-6	3.77E-2	2.62E-6	6.27E-6	2.10E-8	-1.76E-2	2.01E-2
WDP	m3 depriv.	6.28E+0	3.20E-3	5.72E-2	6.34E+0	4.77E-3	4.72E-2	2.04E-3	-1.89E+0	4.50E+0
PM	disease inc.	1.34E-6	5.35E-9	2.42E-9	1.35E-6	9.14E-9	2.29E-8	4.27E-10	-1.82E-7	1.20E-6
IR	kBq U-235 eq	3.31E-1	5.83E-3	8.25E-4	3.37E-1	6.80E-3	1.18E-2	2.73E-4	-1.39E-1	2.17E-1
ETP-fw	CTUe	5.86E+3	1.03E+0	1.49E+0	5.86E+3	1.26E+0	6.33E+0	4.54E-2	-8.35E+2	5.04E+3
HTP-c	CTUh	8.49E-8	5.20E-11	9.06E-11	8.51E-8	4.49E-11	4.49E-10	1.16E-12	-1.86E-8	6.70E-8
HTP-nc	CTUh	6.84E-6	9.76E-10	1.60E-9	6.85E-6	1.51E-9	8.03E-9	3.11E-11	-1.18E-6	5.67E-6
SQP	Pt	9.35E+1	5.97E-1	3.67E-1	9.44E+1	1.33E+0	3.55E+0	1.44E-1	-3.39E+1	6.56E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.02E+1	1.21E-2	5.00E+0	2.52E+1	2.23E-2	2.34E-1	1.15E-3	-8.19E+0	1.72E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.02E+1	1.21E-2	5.00E+0	2.52E+1	2.23E-2	2.34E-1	1.15E-3	-8.19E+0	1.72E+1
PENRE	MJ	1.18E+2	1.46E+0	2.92E-1	1.20E+2	1.65E+0	3.56E+0	6.79E-2	-4.25E+1	8.24E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.18E+2	1.46E+0	2.92E-1	1.20E+2	1.65E+0	3.56E+0	6.79E-2	-4.25E+1	8.24E+1
PET	MJ	1.38E+2	1.47E+0	5.29E+0	1.45E+2	1.67E+0	3.79E+0	6.91E-2	-5.07E+1	9.96E+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	1.59E-1	1.10E-4	1.37E-3	1.61E-1	1.76E-4	1.60E-3	7.17E-5	-4.79E-2	1.15E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.71E-3	2.22E-6	1.77E-6	4.71E-3	3.98E-6	6.68E-6	8.96E-8	-2.22E-3	2.51E-3
NHWD	kg	2.29E+0	3.75E-2	3.28E-2	2.36E+0	9.64E-2	1.53E-1	3.85E-1	-7.85E-1	2.21E+0
RWD	kg	2.79E-4	9.33E-6	1.01E-6	2.89E-4	1.06E-5	1.49E-5	4.19E-7	-1.13E-4	2.03E-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	1.20E+0	1.20E+0	0	0	0	0	1.20E+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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