

Environmental Profile

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

Ecochain v4.3.1



Product: 3050950 - PPr Elbow 90°WT 110
 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	2.66E+0	1.97E-1	7.48E-2	2.94E+0	6.26E-2	2.12E+0	2.95E-2	-1.43E+0	3.72E+0
GWP-f	kg CO2 eq	2.65E+0	1.97E-1	7.23E-2	2.92E+0	6.25E-2	1.99E+0	2.95E-2	-1.58E+0	3.42E+0
GWP-b	kg CO2 eq	1.12E-2	-3.29E-5	2.53E-3	1.37E-2	3.80E-5	1.35E-1	2.57E-5	1.52E-1	3.01E-1
GWP-luluc	kg CO2 eq	1.73E-3	1.24E-4	4.41E-5	1.89E-3	2.21E-5	3.60E-4	5.02E-7	-1.38E-3	8.98E-4
ODP	kg CFC11 eq	6.80E-8	4.02E-8	5.79E-9	1.14E-7	1.44E-8	5.03E-8	7.39E-10	-6.95E-8	1.10E-7
AP	mol H+ eq	1.08E-2	5.45E-3	4.60E-4	1.67E-2	3.56E-4	2.09E-3	1.76E-5	-4.85E-3	1.44E-2
EP-fw	kg P eq	4.98E-5	1.00E-6	5.77E-6	5.66E-5	5.15E-7	1.05E-5	2.30E-8	-2.97E-5	3.79E-5
EP-m	kg N eq	1.80E-3	1.36E-3	1.60E-4	3.32E-3	1.27E-4	6.23E-4	1.15E-5	-9.01E-4	3.18E-3
EP-T	mol N eq	1.96E-2	1.51E-2	1.09E-3	3.58E-2	1.40E-3	6.85E-3	7.16E-5	-1.01E-2	3.41E-2
POCP	kg NMVOC eq	8.44E-3	3.93E-3	3.54E-4	1.27E-2	4.02E-4	2.15E-3	2.69E-5	-4.21E-3	1.11E-2
ADP-f	MJ	8.99E+1	2.59E+0	7.18E-1	9.32E+1	9.60E-1	6.41E+0	5.40E-2	-4.80E+1	5.27E+1
ADP-mm	kg Sb eq	3.47E-5	2.09E-6	5.73E-6	4.26E-5	1.62E-6	8.29E-6	1.78E-8	-1.07E-5	4.18E-5
WDP	m3 depriv.	1.85E+0	4.88E-3	1.49E-1	2.01E+0	2.95E-3	1.22E-1	2.74E-4	-1.02E+0	1.11E+0
PM	disease inc.	9.27E-8	8.11E-9	6.31E-9	1.07E-7	5.65E-9	3.41E-8	3.71E-10	-4.90E-8	9.83E-8
IR	kBq U-235 eq	5.46E-2	1.11E-2	2.15E-3	6.78E-2	4.20E-3	1.97E-2	2.50E-4	-3.12E-2	6.08E-2
ETP-fw	CTUe	3.44E+1	1.80E+0	3.88E+0	4.01E+1	7.80E-1	7.49E+0	4.52E-2	-1.76E+1	3.08E+1
HTP-c	CTUh	8.45E-10	1.07E-10	2.36E-10	1.19E-9	2.77E-11	8.92E-10	1.32E-12	-3.36E-10	1.77E-9
HTP-nc	CTUh	1.97E-8	1.58E-9	4.17E-9	2.55E-8	9.29E-10	1.09E-8	2.91E-11	-1.00E-8	2.73E-8
SQP	Pt	1.01E+1	7.27E-1	9.58E-1	1.18E+1	8.21E-1	5.05E+0	1.39E-1	-2.95E+1	-1.17E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.70E+0	2.00E-2	1.30E+1	1.58E+1	1.38E-2	3.10E-1	2.09E-3	-5.69E+0	1.04E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.70E+0	2.00E-2	1.30E+1	1.58E+1	1.38E-2	3.10E-1	2.09E-3	-5.69E+0	1.04E+1
PENRE	MJ	9.65E+1	2.75E+0	7.63E-1	1.00E+2	1.02E+0	6.82E+0	5.73E-2	-5.17E+1	5.62E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.65E+1	2.75E+0	7.63E-1	1.00E+2	1.02E+0	6.82E+0	5.73E-2	-5.17E+1	5.62E+1
PET	MJ	9.92E+1	2.77E+0	1.38E+1	1.16E+2	1.03E+0	7.13E+0	5.94E-2	-5.74E+1	6.66E+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	3.01E-2	1.70E-4	3.58E-3	3.39E-2	1.09E-4	3.66E-3	6.66E-5	-1.78E-2	1.99E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.48E-5	3.26E-6	4.62E-6	2.27E-5	2.46E-6	1.08E-5	6.51E-8	-1.34E-5	2.26E-5
NHWD	kg	1.77E-1	3.74E-2	8.56E-2	3.00E-1	5.95E-2	3.18E-1	2.38E-1	-4.79E-2	8.68E-1
RWD	kg	4.89E-5	1.78E-5	2.64E-6	6.94E-5	6.53E-6	2.52E-5	3.52E-7	-2.87E-5	7.28E-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	3.12E+0	3.12E+0	0	0	0	0	3.12E+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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