

Environmental Profile

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

Ecochain v4.3.1



Product: 3040139 - PPr Elbow F/M 90°GY 25/20
 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	7.18E-2	4.83E-3	1.77E-3	7.84E-2	1.53E-3	6.57E-2	7.19E-4	-4.02E-2	1.06E-1
GWP-f	kg CO2 eq	7.17E-2	4.83E-3	1.71E-3	7.83E-2	1.53E-3	6.35E-2	7.19E-4	-4.26E-2	1.01E-1
GWP-b	kg CO2 eq	1.73E-5	-7.24E-7	5.97E-5	7.63E-5	9.27E-7	2.14E-3	6.24E-7	2.39E-3	4.61E-3
GWP-luluc	kg CO2 eq	3.87E-5	3.02E-6	1.04E-6	4.28E-5	5.40E-7	8.85E-6	1.26E-8	-2.47E-5	2.75E-5
ODP	kg CFC11 eq	1.79E-9	9.89E-10	1.37E-10	2.92E-9	3.52E-10	1.23E-9	1.81E-11	-2.08E-9	2.43E-9
AP	mol H+ eq	2.75E-4	1.31E-4	1.09E-5	4.17E-4	8.70E-6	5.23E-5	4.33E-7	-1.16E-4	3.62E-4
EP-fw	kg P eq	1.39E-6	2.52E-8	1.36E-7	1.55E-6	1.26E-8	2.57E-7	5.73E-10	-6.20E-7	1.20E-6
EP-m	kg N eq	4.81E-5	3.27E-5	3.79E-6	8.46E-5	3.11E-6	1.58E-5	2.78E-7	-2.18E-5	8.20E-5
EP-T	mol N eq	5.39E-4	3.63E-4	2.57E-5	9.28E-4	3.43E-5	1.74E-4	1.75E-6	-2.42E-4	8.95E-4
POCP	kg NMVOC eq	2.32E-4	9.47E-5	8.37E-6	3.36E-4	9.80E-6	5.42E-5	6.57E-7	-1.03E-4	2.97E-4
ADP-f	MJ	2.37E+0	6.39E-2	1.70E-2	2.46E+0	2.34E-2	1.57E-1	1.32E-3	-1.24E+0	1.40E+0
ADP-mm	kg Sb eq	1.14E-6	5.34E-8	1.36E-7	1.33E-6	3.95E-8	2.01E-7	4.39E-10	-2.55E-7	1.32E-6
WDP	m3 depriv.	5.02E-2	1.23E-4	3.52E-3	5.39E-2	7.19E-5	3.01E-3	7.96E-6	-2.34E-2	3.36E-2
PM	disease inc.	2.45E-9	2.06E-10	1.49E-10	2.81E-9	1.38E-10	8.41E-10	9.08E-12	-1.09E-9	2.70E-9
IR	kBq U-235 eq	1.48E-3	2.72E-4	5.09E-5	1.80E-3	1.02E-4	4.82E-4	6.10E-6	-7.07E-4	1.69E-3
ETP-fw	CTUe	7.97E-1	4.48E-2	9.18E-2	9.34E-1	1.90E-2	1.84E-1	1.11E-3	-3.37E-1	8.01E-1
HTP-c	CTUh	1.89E-11	2.61E-12	5.59E-12	2.71E-11	6.77E-13	2.41E-11	3.32E-14	-7.79E-12	4.41E-11
HTP-nc	CTUh	5.21E-10	3.97E-11	9.85E-11	6.59E-10	2.27E-11	2.80E-10	7.17E-13	-2.23E-10	7.39E-10
SQP	Pt	2.26E-1	1.91E-2	2.26E-2	2.68E-1	2.00E-2	1.24E-1	3.38E-3	-4.84E-1	-6.89E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.33E-2	5.02E-4	3.08E-1	3.72E-1	3.36E-4	7.61E-3	5.04E-5	-9.62E-2	2.84E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.33E-2	5.02E-4	3.08E-1	3.72E-1	3.36E-4	7.61E-3	5.04E-5	-9.62E-2	2.84E-1
PENRE	MJ	2.55E+0	6.79E-2	1.80E-2	2.63E+0	2.49E-2	1.67E-1	1.40E-3	-1.34E+0	1.49E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.55E+0	6.79E-2	1.80E-2	2.63E+0	2.49E-2	1.67E-1	1.40E-3	-1.34E+0	1.49E+0
PET	MJ	2.61E+0	6.84E-2	3.26E-1	3.01E+0	2.52E-2	1.75E-1	1.45E-3	-1.44E+0	1.77E+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	8.50E-4	4.31E-6	8.45E-5	9.39E-4	2.65E-6	9.19E-5	1.62E-6	-3.93E-4	6.43E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.80E-7	8.30E-8	1.09E-7	5.72E-7	5.99E-8	2.66E-7	1.60E-9	-4.03E-7	4.97E-7
NHWD	kg	3.77E-3	1.02E-3	2.02E-3	6.81E-3	1.45E-3	8.47E-3	5.81E-3	-1.10E-3	2.14E-2
RWD	kg	1.29E-6	4.39E-7	6.23E-8	1.79E-6	1.59E-7	6.16E-7	8.60E-9	-6.57E-7	1.92E-6
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	7.38E-2	7.38E-2	0	0	0	0	7.38E-2
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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