

Environmental Profile

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

Ecochain v4.3.1



Product: 3040124 - PPr Elbow 45°GY 63
 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	4.85E-1	3.52E-2	1.36E-2	5.34E-1	1.14E-2	4.02E-1	5.36E-3	-2.66E-1	6.87E-1
GWP-f	kg CO2 eq	4.83E-1	3.52E-2	1.31E-2	5.32E-1	1.14E-2	3.79E-1	5.36E-3	-2.91E-1	6.36E-1
GWP-b	kg CO2 eq	1.69E-3	-5.98E-6	4.58E-4	2.14E-3	6.91E-6	2.27E-2	4.66E-6	2.55E-2	5.03E-2
GWP-luluc	kg CO2 eq	2.84E-4	2.23E-5	8.00E-6	3.14E-4	4.02E-6	6.56E-5	9.26E-8	-2.36E-4	1.48E-4
ODP	kg CFC11 eq	1.21E-8	7.19E-9	1.05E-9	2.03E-8	2.62E-9	9.14E-9	1.35E-10	-1.30E-8	1.92E-8
AP	mol H+ eq	1.81E-3	9.78E-4	8.34E-5	2.87E-3	6.48E-5	3.81E-4	3.21E-6	-8.76E-4	2.45E-3
EP-fw	kg P eq	8.89E-6	1.79E-7	1.05E-6	1.01E-5	9.36E-8	1.91E-6	4.23E-9	-5.22E-6	6.90E-6
EP-m	kg N eq	3.23E-4	2.44E-4	2.91E-5	5.96E-4	2.32E-5	1.14E-4	2.08E-6	-1.63E-4	5.72E-4
EP-T	mol N eq	3.59E-3	2.71E-3	1.97E-4	6.50E-3	2.55E-4	1.25E-3	1.30E-5	-1.82E-3	6.20E-3
POCP	kg NMVOC eq	1.53E-3	7.06E-4	6.43E-5	2.30E-3	7.30E-5	3.93E-4	4.89E-6	-7.63E-4	2.01E-3
ADP-f	MJ	1.64E+1	4.64E-1	1.30E-1	1.70E+1	1.75E-1	1.16E+0	9.83E-3	-8.80E+0	9.52E+0
ADP-mm	kg Sb eq	7.52E-6	3.73E-7	1.04E-6	8.93E-6	2.94E-7	1.50E-6	3.25E-9	-1.93E-6	8.80E-6
WDP	m3 depriv.	3.34E-1	8.68E-4	2.71E-2	3.62E-1	5.36E-4	2.22E-2	5.46E-5	-1.83E-1	2.02E-1
PM	disease inc.	1.66E-8	1.44E-9	1.15E-9	1.92E-8	1.03E-9	6.21E-9	6.76E-11	-8.73E-9	1.77E-8
IR	kBq U-235 eq	9.74E-3	1.98E-3	3.91E-4	1.21E-2	7.63E-4	3.58E-3	4.55E-5	-5.56E-3	1.09E-2
ETP-fw	CTUe	6.02E+0	3.22E-1	7.05E-1	7.05E+0	1.42E-1	1.36E+0	8.22E-3	-3.05E+0	5.51E+0
HTP-c	CTUh	1.24E-10	1.91E-11	4.29E-11	1.86E-10	5.04E-12	1.67E-10	2.44E-13	-6.03E-11	2.98E-10
HTP-nc	CTUh	3.44E-9	2.82E-10	7.56E-10	4.48E-9	1.69E-10	2.00E-9	5.32E-12	-1.78E-9	4.87E-9
SQP	Pt	1.74E+0	1.29E-1	1.74E-1	2.04E+0	1.49E-1	9.19E-1	2.52E-2	-4.97E+0	-1.84E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.71E-1	3.58E-3	2.37E+0	2.84E+0	2.50E-3	5.64E-2	3.78E-4	-9.64E-1	1.94E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.71E-1	3.58E-3	2.37E+0	2.84E+0	2.50E-3	5.64E-2	3.78E-4	-9.64E-1	1.94E+0
PENRE	MJ	1.76E+1	4.93E-1	1.38E-1	1.82E+1	1.85E-1	1.24E+0	1.04E-2	-9.48E+0	1.02E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.76E+1	4.93E-1	1.38E-1	1.82E+1	1.85E-1	1.24E+0	1.04E-2	-9.48E+0	1.02E+1
PET	MJ	1.80E+1	4.96E-1	2.51E+0	2.10E+1	1.88E-1	1.30E+0	1.08E-2	-1.04E+1	1.21E+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	5.40E-3	3.03E-5	6.49E-4	6.08E-3	1.98E-5	6.68E-4	1.21E-5	-3.17E-3	3.61E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.60E-6	5.79E-7	8.38E-7	4.02E-6	4.46E-7	1.96E-6	1.19E-8	-2.51E-6	3.92E-6
NHWD	kg	2.43E-2	6.59E-3	1.55E-2	4.64E-2	1.08E-2	5.87E-2	4.32E-2	-8.58E-3	1.51E-1
RWD	kg	8.61E-6	3.19E-6	4.79E-7	1.23E-5	1.19E-6	4.58E-6	6.41E-8	-5.12E-6	1.30E-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	5.67E-1	5.67E-1	0	0	0	0	5.67E-1
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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