

Environmental Profile

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

Ecochain v4.3.1



Product: 3050943 - PPr Elbow 45°WT 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	4.99E-1	3.60E-2	1.36E-2	5.48E-1	1.15E-2	4.05E-1	5.41E-3	-2.69E-1	7.01E-1
GWP-f	kg CO2 eq	4.97E-1	3.60E-2	1.31E-2	5.46E-1	1.15E-2	3.82E-1	5.41E-3	-2.94E-1	6.51E-1
GWP-b	kg CO2 eq	1.52E-3	-5.95E-6	4.58E-4	1.97E-3	6.97E-6	2.27E-2	4.70E-6	2.55E-2	5.02E-2
GWP-luluc	kg CO2 eq	4.33E-4	2.27E-5	8.00E-6	4.64E-4	4.06E-6	6.62E-5	9.29E-8	-2.36E-4	2.98E-4
ODP	kg CFC11 eq	1.32E-8	7.35E-9	1.05E-9	2.16E-8	2.64E-9	9.21E-9	1.36E-10	-1.32E-8	2.04E-8
AP	mol H+ eq	2.09E-3	9.93E-4	8.34E-5	3.17E-3	6.54E-5	3.84E-4	3.24E-6	-8.84E-4	2.74E-3
EP-fw	kg P eq	9.51E-6	1.84E-7	1.05E-6	1.07E-5	9.44E-8	1.92E-6	4.25E-9	-5.25E-6	7.52E-6
EP-m	kg N eq	3.39E-4	2.48E-4	2.91E-5	6.16E-4	2.34E-5	1.15E-4	2.10E-6	-1.64E-4	5.92E-4
EP-T	mol N eq	3.69E-3	2.76E-3	1.97E-4	6.65E-3	2.58E-4	1.26E-3	1.32E-5	-1.83E-3	6.35E-3
POCP	kg NMVOC eq	1.59E-3	7.18E-4	6.43E-5	2.38E-3	7.37E-5	3.96E-4	4.94E-6	-7.70E-4	2.08E-3
ADP-f	MJ	1.67E+1	4.75E-1	1.30E-1	1.73E+1	1.76E-1	1.17E+0	9.91E-3	-8.88E+0	9.81E+0
ADP-mm	kg Sb eq	6.45E-6	3.85E-7	1.04E-6	7.88E-6	2.97E-7	1.52E-6	3.27E-9	-1.95E-6	7.75E-6
WDP	m3 depriv.	3.50E-1	8.95E-4	2.71E-2	3.78E-1	5.41E-4	2.25E-2	5.30E-5	-1.84E-1	2.17E-1
PM	disease inc.	1.74E-8	1.49E-9	1.15E-9	2.01E-8	1.04E-9	6.26E-9	6.82E-11	-8.79E-9	1.87E-8
IR	kBq U-235 eq	1.04E-2	2.02E-3	3.91E-4	1.28E-2	7.70E-4	3.61E-3	4.59E-5	-5.60E-3	1.17E-2
ETP-fw	CTUe	6.26E+0	3.30E-1	7.05E-1	7.30E+0	1.43E-1	1.37E+0	8.30E-3	-3.06E+0	5.76E+0
HTP-c	CTUh	1.67E-10	1.95E-11	4.29E-11	2.30E-10	5.09E-12	1.67E-10	2.44E-13	-6.07E-11	3.41E-10
HTP-nc	CTUh	3.78E-9	2.90E-10	7.56E-10	4.82E-9	1.71E-10	2.01E-9	5.35E-12	-1.79E-9	5.22E-9
SQP	Pt	1.84E+0	1.34E-1	1.74E-1	2.15E+0	1.51E-1	9.27E-1	2.54E-2	-4.97E+0	-1.72E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.95E-1	3.67E-3	2.37E+0	2.87E+0	2.53E-3	5.69E-2	3.82E-4	-9.65E-1	1.96E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.95E-1	3.67E-3	2.37E+0	2.87E+0	2.53E-3	5.69E-2	3.82E-4	-9.65E-1	1.96E+0
PENRE	MJ	1.80E+1	5.04E-1	1.38E-1	1.86E+1	1.87E-1	1.25E+0	1.05E-2	-9.57E+0	1.05E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.80E+1	5.04E-1	1.38E-1	1.86E+1	1.87E-1	1.25E+0	1.05E-2	-9.57E+0	1.05E+1
PET	MJ	1.84E+1	5.08E-1	2.51E+0	2.15E+1	1.90E-1	1.31E+0	1.09E-2	-1.05E+1	1.24E+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	5.77E-3	3.12E-5	6.49E-4	6.45E-3	1.99E-5	6.74E-4	1.22E-5	-3.19E-3	3.97E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.45E-6	5.98E-7	8.38E-7	4.88E-6	4.51E-7	1.97E-6	1.20E-8	-2.54E-6	4.78E-6
NHWD	kg	3.54E-2	6.93E-3	1.55E-2	5.79E-2	1.09E-2	5.92E-2	4.36E-2	-8.64E-3	1.63E-1
RWD	kg	9.39E-6	3.26E-6	4.79E-7	1.31E-5	1.20E-6	4.62E-6	6.47E-8	-5.16E-6	1.39E-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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