

Environmental Profile

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

Ecochain v4.3.1



Product: 3050940 - PPr Elbow 90°WT 40
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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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]; **PENRT** = 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	1.75E-1	1.19E-2	4.36E-3	1.92E-1	3.79E-3	1.48E-1	1.78E-3	-9.35E-2	2.51E-1
GWP-f	kg CO2 eq	1.75E-1	1.19E-2	4.21E-3	1.91E-1	3.79E-3	1.40E-1	1.79E-3	-1.01E-1	2.36E-1
GWP-b	kg CO2 eq	1.08E-4	-1.77E-6	1.47E-4	2.53E-4	2.30E-6	7.00E-3	1.55E-6	7.88E-3	1.51E-2
GWP-luluc	kg CO2 eq	2.48E-4	7.44E-6	2.57E-6	2.58E-4	1.34E-6	2.19E-5	3.16E-8	-7.44E-5	2.06E-4
ODP	kg CFC11 eq	5.38E-9	2.45E-9	3.37E-10	8.16E-9	8.74E-10	3.07E-9	4.49E-11	-4.76E-9	7.39E-9
AP	mol H+ eq	8.32E-4	3.22E-4	2.68E-5	1.18E-3	2.16E-5	1.29E-4	1.08E-6	-2.93E-4	1.04E-3
EP-fw	kg P eq	3.65E-6	6.25E-8	3.36E-7	4.05E-6	3.12E-8	6.38E-7	1.43E-9	-1.69E-6	3.03E-6
EP-m	kg N eq	1.25E-4	8.06E-5	9.33E-6	2.15E-4	7.73E-6	3.86E-5	6.88E-7	-5.48E-5	2.07E-4
EP-T	mol N eq	1.34E-3	8.96E-4	6.32E-5	2.30E-3	8.51E-5	4.25E-4	4.36E-6	-6.11E-4	2.21E-3
POCP	kg NMVOC eq	5.76E-4	2.34E-4	2.06E-5	8.30E-4	2.43E-5	1.33E-4	1.63E-6	-2.57E-4	7.32E-4
ADP-f	MJ	5.72E+0	1.58E-1	4.18E-2	5.92E+0	5.82E-2	3.90E-1	3.28E-3	-3.01E+0	3.37E+0
ADP-mm	kg Sb eq	2.24E-6	1.33E-7	3.34E-7	2.71E-6	9.81E-8	5.02E-7	1.09E-9	-6.42E-7	2.67E-6
WDP	m3 depriv.	1.26E-1	3.06E-4	8.69E-3	1.35E-1	1.79E-4	7.44E-3	2.08E-5	-6.04E-2	8.26E-2
PM	disease inc.	6.39E-9	5.10E-10	3.68E-10	7.27E-9	3.42E-10	2.08E-9	2.26E-11	-2.87E-9	6.85E-9
IR	kBq U-235 eq	3.94E-3	6.74E-4	1.25E-4	4.74E-3	2.54E-4	1.20E-3	1.51E-5	-1.84E-3	4.37E-3
ETP-fw	CTUe	2.28E+0	1.11E-1	2.26E-1	2.62E+0	4.72E-2	4.57E-1	2.75E-3	-9.75E-1	2.15E+0
HTP-c	CTUh	7.42E-11	6.44E-12	1.38E-11	9.44E-11	1.68E-12	5.86E-11	8.33E-14	-2.01E-11	1.35E-10
HTP-nc	CTUh	1.48E-9	9.84E-11	2.43E-10	1.82E-9	5.63E-11	6.84E-10	1.79E-12	-5.87E-10	1.97E-9
SQP	Pt	6.74E-1	4.75E-2	5.58E-2	7.77E-1	4.98E-2	3.08E-1	8.40E-3	-1.55E+0	-4.03E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.78E-1	1.24E-3	7.60E-1	9.39E-1	8.35E-4	1.89E-2	1.25E-4	-3.01E-1	6.57E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.78E-1	1.24E-3	7.60E-1	9.39E-1	8.35E-4	1.89E-2	1.25E-4	-3.01E-1	6.57E-1
PENRE	MJ	6.14E+0	1.68E-1	4.44E-2	6.35E+0	6.18E-2	4.15E-1	3.48E-3	-3.24E+0	3.59E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.14E+0	1.68E-1	4.44E-2	6.35E+0	6.18E-2	4.15E-1	3.48E-3	-3.24E+0	3.59E+0
PET	MJ	6.32E+0	1.69E-1	8.04E-1	7.29E+0	6.26E-2	4.34E-1	3.61E-3	-3.54E+0	4.25E+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	2.19E-3	1.07E-5	2.08E-4	2.41E-3	6.58E-6	2.25E-4	4.03E-6	-1.04E-3	1.60E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.79E-6	2.06E-7	2.69E-7	2.27E-6	1.49E-7	6.59E-7	3.99E-9	-9.17E-7	2.16E-6
NHWD	kg	1.65E-2	2.55E-3	4.99E-3	2.40E-2	3.61E-3	2.03E-2	1.44E-2	-2.84E-3	5.94E-2
RWD	kg	3.62E-6	1.09E-6	1.54E-7	4.86E-6	3.96E-7	1.53E-6	2.14E-8	-1.70E-6	5.11E-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	1.82E-1	1.82E-1	0	0	0	0	1.82E-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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