

Environmental Profile

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

Ecochain v4.3.1



Product: 3050948 - PPr Elbow 90°WT 90
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	1.64E+0	1.21E-1	4.67E-2	1.81E+0	3.91E-2	1.30E+0	1.84E-2	-8.99E-1	2.27E+0
GWP-f	kg CO2 eq	1.63E+0	1.21E-1	4.51E-2	1.80E+0	3.91E-2	1.23E+0	1.84E-2	-9.74E-1	2.11E+0
GWP-b	kg CO2 eq	6.74E-3	-2.16E-5	1.58E-3	8.29E-3	2.38E-5	6.72E-2	1.61E-5	7.56E-2	1.51E-1
GWP-luluc	kg CO2 eq	1.02E-3	7.69E-5	2.75E-5	1.12E-3	1.38E-5	2.24E-4	3.14E-7	-7.25E-4	6.37E-4
ODP	kg CFC11 eq	4.01E-8	2.46E-8	3.62E-9	6.84E-8	9.01E-9	3.09E-8	4.63E-10	-4.18E-8	6.70E-8
AP	mol H+ eq	6.65E-3	3.39E-3	2.87E-4	1.03E-2	2.23E-4	1.29E-3	1.10E-5	-2.94E-3	8.91E-3
EP-fw	kg P eq	2.97E-5	6.04E-7	3.60E-6	3.39E-5	3.22E-7	6.52E-6	1.44E-8	-1.69E-5	2.39E-5
EP-m	kg N eq	1.09E-3	8.45E-4	1.00E-4	2.03E-3	7.97E-5	3.82E-4	7.18E-6	-5.42E-4	1.96E-3
EP-T	mol N eq	1.19E-2	9.39E-3	6.78E-4	2.20E-2	8.79E-4	4.20E-3	4.48E-5	-6.04E-3	2.11E-2
POCP	kg NMVOC eq	5.19E-3	2.45E-3	2.21E-4	7.85E-3	2.51E-4	1.32E-3	1.68E-5	-2.57E-3	6.88E-3
ADP-f	MJ	5.58E+1	1.59E+0	4.48E-1	5.78E+1	6.00E-1	3.97E+0	3.38E-2	-2.98E+1	3.27E+1
ADP-mm	kg Sb eq	2.14E-5	1.25E-6	3.58E-6	2.63E-5	1.01E-6	5.10E-6	1.11E-8	-6.55E-6	2.58E-5
WDP	m3 depriv.	1.15E+0	2.93E-3	9.32E-2	1.24E+0	1.84E-3	7.61E-2	1.72E-4	-6.10E-1	7.12E-1
PM	disease inc.	5.63E-8	4.87E-9	3.94E-9	6.51E-8	3.53E-9	2.10E-8	2.32E-10	-2.88E-8	6.11E-8
IR	kBq U-235 eq	3.32E-2	6.78E-3	1.35E-3	4.13E-2	2.62E-3	1.22E-2	1.57E-4	-1.83E-2	3.80E-2
ETP-fw	CTUe	1.90E+1	1.10E+0	2.43E+0	2.25E+1	4.88E-1	4.61E+0	2.83E-2	-9.52E+0	1.81E+1
HTP-c	CTUh	5.15E-10	6.58E-11	1.48E-10	7.29E-10	1.74E-11	5.51E-10	8.26E-13	-1.99E-10	1.10E-9
HTP-nc	CTUh	1.20E-8	9.55E-10	2.60E-9	1.56E-8	5.81E-10	6.74E-9	1.82E-11	-5.86E-9	1.70E-8
SQP	Pt	5.50E+0	4.26E-1	5.98E-1	6.52E+0	5.14E-1	3.14E+0	8.66E-2	-1.49E+1	-4.63E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.52E+0	1.21E-2	8.15E+0	9.68E+0	8.61E-3	1.93E-1	1.31E-3	-2.92E+0	6.97E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.52E+0	1.21E-2	8.15E+0	9.68E+0	8.61E-3	1.93E-1	1.31E-3	-2.92E+0	6.97E+0
PENRE	MJ	5.99E+1	1.69E+0	4.76E-1	6.21E+1	6.37E-1	4.23E+0	3.58E-2	-3.21E+1	3.49E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.99E+1	1.69E+0	4.76E-1	6.21E+1	6.37E-1	4.23E+0	3.58E-2	-3.21E+1	3.49E+1
PET	MJ	6.14E+1	1.70E+0	8.62E+0	7.17E+1	6.46E-1	4.42E+0	3.71E-2	-3.50E+1	4.18E+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	1.85E-2	1.02E-4	2.23E-3	2.08E-2	6.79E-5	2.27E-3	4.16E-5	-1.04E-2	1.28E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.17E-6	1.95E-6	2.88E-6	1.40E-5	1.54E-6	6.62E-6	4.07E-8	-8.06E-6	1.41E-5
NHWD	kg	1.06E-1	2.13E-2	5.35E-2	1.81E-1	3.72E-2	1.97E-1	1.49E-1	-2.84E-2	5.36E-1
RWD	kg	2.96E-5	1.09E-5	1.65E-6	4.22E-5	4.08E-6	1.55E-5	2.20E-7	-1.68E-5	4.53E-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	1.95E+0	1.95E+0	0	0	0	0	1.95E+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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