

Environmental Profile

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

Ecochain v4.3.1



Product: 3050941 - PPr Elbow 45°WT 50
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	2.65E-1	1.84E-2	6.82E-3	2.90E-1	5.85E-3	2.23E-1	2.75E-3	-1.42E-1	3.79E-1
GWP-f	kg CO2 eq	2.64E-1	1.84E-2	6.59E-3	2.89E-1	5.84E-3	2.11E-1	2.75E-3	-1.55E-1	3.54E-1
GWP-b	kg CO2 eq	3.85E-4	-2.89E-6	2.30E-4	6.12E-4	3.55E-6	1.13E-2	2.39E-6	1.27E-2	2.47E-2
GWP-luluc	kg CO2 eq	3.00E-4	1.15E-5	4.02E-6	3.16E-4	2.07E-6	3.38E-5	4.78E-8	-1.19E-4	2.33E-4
ODP	kg CFC11 eq	7.44E-9	3.77E-9	5.28E-10	1.17E-8	1.35E-9	4.73E-9	6.91E-11	-7.22E-9	1.07E-8
AP	mol H+ eq	1.16E-3	5.03E-4	4.19E-5	1.70E-3	3.33E-5	1.98E-4	1.65E-6	-4.53E-4	1.48E-3
EP-fw	kg P eq	5.28E-6	9.51E-8	5.26E-7	5.90E-6	4.81E-8	9.84E-7	2.18E-9	-2.66E-6	4.27E-6
EP-m	kg N eq	1.84E-4	1.26E-4	1.46E-5	3.24E-4	1.19E-5	5.95E-5	1.07E-6	-8.47E-5	3.12E-4
EP-T	mol N eq	1.99E-3	1.40E-3	9.90E-5	3.49E-3	1.31E-4	6.54E-4	6.70E-6	-9.44E-4	3.34E-3
POCP	kg NMVOC eq	8.58E-4	3.64E-4	3.23E-5	1.25E-3	3.75E-5	2.05E-4	2.51E-6	-3.96E-4	1.10E-3
ADP-f	MJ	8.77E+0	2.43E-1	6.54E-2	9.07E+0	8.97E-2	6.01E-1	5.05E-3	-4.61E+0	5.16E+0
ADP-mm	kg Sb eq	3.39E-6	2.00E-7	5.23E-7	4.11E-6	1.51E-7	7.75E-7	1.67E-9	-9.93E-7	4.04E-6
WDP	m3 depriv.	1.88E-1	4.65E-4	1.36E-2	2.02E-1	2.75E-4	1.15E-2	2.89E-5	-9.39E-2	1.19E-1
PM	disease inc.	9.40E-9	7.73E-10	5.76E-10	1.07E-8	5.27E-10	3.21E-9	3.47E-11	-4.47E-9	1.01E-8
IR	kBq U-235 eq	5.72E-3	1.04E-3	1.96E-4	6.95E-3	3.92E-4	1.85E-3	2.34E-5	-2.87E-3	6.35E-3
ETP-fw	CTUe	3.37E+0	1.70E-1	3.54E-1	3.90E+0	7.28E-2	7.04E-1	4.23E-3	-1.55E+0	3.13E+0
HTP-c	CTUh	9.59E-11	9.96E-12	2.15E-11	1.27E-10	2.59E-12	8.81E-11	1.26E-13	-3.12E-11	1.87E-10
HTP-nc	CTUh	2.08E-9	1.50E-10	3.80E-10	2.61E-9	8.68E-11	1.05E-9	2.74E-12	-9.14E-10	2.83E-9
SQP	Pt	9.97E-1	7.08E-2	8.73E-2	1.16E+0	7.67E-2	4.75E-1	1.29E-2	-2.49E+0	-7.72E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.66E-1	1.90E-3	1.19E+0	1.46E+0	1.29E-3	2.91E-2	1.94E-4	-4.84E-1	1.00E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.66E-1	1.90E-3	1.19E+0	1.46E+0	1.29E-3	2.91E-2	1.94E-4	-4.84E-1	1.00E+0
PENRE	MJ	9.41E+0	2.58E-1	6.95E-2	9.73E+0	9.52E-2	6.40E-1	5.36E-3	-4.98E+0	5.50E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.41E+0	2.58E-1	6.95E-2	9.73E+0	9.52E-2	6.40E-1	5.36E-3	-4.98E+0	5.50E+0
PET	MJ	9.67E+0	2.60E-1	1.26E+0	1.12E+1	9.65E-2	6.69E-1	5.55E-3	-5.46E+0	6.50E+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	3.17E-3	1.62E-5	3.26E-4	3.51E-3	1.02E-5	3.47E-4	6.21E-6	-1.62E-3	2.25E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.24E-6	3.11E-7	4.21E-7	2.97E-6	2.29E-7	1.01E-6	6.12E-9	-1.39E-6	2.83E-6
NHWD	kg	2.07E-2	3.73E-3	7.81E-3	3.23E-2	5.56E-3	3.10E-2	2.22E-2	-4.42E-3	8.66E-2
RWD	kg	5.19E-6	1.67E-6	2.40E-7	7.10E-6	6.10E-7	2.37E-6	3.29E-8	-2.65E-6	7.46E-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	2.85E-1	2.85E-1	0	0	0	0	2.85E-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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