

Environmental Profile

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

Ecochain v4.3.1



Product: 3040132 - PPr Elbow 90°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					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	5.79E-1	4.20E-2	1.65E-2	6.37E-1	1.39E-2	4.72E-1	6.52E-3	-3.24E-1	8.06E-1
GWP-f	kg CO2 eq	5.76E-1	4.20E-2	1.60E-2	6.34E-1	1.38E-2	4.51E-1	6.53E-3	-3.48E-1	7.58E-1
GWP-b	kg CO2 eq	2.10E-3	-7.70E-6	5.59E-4	2.65E-3	8.41E-6	2.15E-2	5.67E-6	2.41E-2	4.82E-2
GWP-luluc	kg CO2 eq	3.01E-4	2.68E-5	9.75E-6	3.38E-4	4.90E-6	7.94E-5	1.13E-7	-2.38E-4	1.84E-4
ODP	kg CFC11 eq	1.37E-8	8.55E-9	1.28E-9	2.35E-8	3.19E-9	1.09E-8	1.64E-10	-1.50E-8	2.28E-8
AP	mol H+ eq	2.14E-3	1.19E-3	1.02E-4	3.43E-3	7.89E-5	4.56E-4	3.91E-6	-1.03E-3	2.94E-3
EP-fw	kg P eq	1.02E-5	2.09E-7	1.28E-6	1.17E-5	1.14E-7	2.31E-6	5.15E-9	-5.74E-6	8.37E-6
EP-m	kg N eq	3.77E-4	2.95E-4	3.54E-5	7.07E-4	2.82E-5	1.35E-4	2.53E-6	-1.90E-4	6.84E-4
EP-T	mol N eq	4.20E-3	3.28E-3	2.40E-4	7.72E-3	3.11E-4	1.49E-3	1.59E-5	-2.12E-3	7.42E-3
POCP	kg NMVOC eq	1.81E-3	8.54E-4	7.83E-5	2.75E-3	8.89E-5	4.68E-4	5.96E-6	-9.05E-4	2.41E-3
ADP-f	MJ	1.97E+1	5.51E-1	1.59E-1	2.04E+1	2.13E-1	1.40E+0	1.20E-2	-1.06E+1	1.14E+1
ADP-mm	kg Sb eq	9.00E-6	4.31E-7	1.27E-6	1.07E-5	3.58E-7	1.80E-6	3.96E-9	-2.30E-6	1.06E-5
WDP	m3 depriv.	4.00E-1	1.01E-3	3.30E-2	4.34E-1	6.52E-4	2.69E-2	6.63E-5	-2.13E-1	2.49E-1
PM	disease inc.	1.94E-8	1.68E-9	1.40E-9	2.25E-8	1.25E-9	7.44E-9	8.23E-11	-9.96E-9	2.13E-8
IR	kBq U-235 eq	1.14E-2	2.35E-3	4.76E-4	1.42E-2	9.29E-4	4.30E-3	5.54E-5	-6.33E-3	1.32E-2
ETP-fw	CTUe	6.38E+0	3.79E-1	8.59E-1	7.62E+0	1.73E-1	1.63E+0	1.00E-2	-3.18E+0	6.26E+0
HTP-c	CTUh	1.46E-10	2.29E-11	5.23E-11	2.21E-10	6.14E-12	2.00E-10	2.97E-13	-6.91E-11	3.58E-10
HTP-nc	CTUh	4.04E-9	3.30E-10	9.22E-10	5.29E-9	2.06E-10	2.40E-9	6.47E-12	-2.03E-9	5.88E-9
SQP	Pt	1.81E+0	1.45E-1	2.12E-1	2.17E+0	1.82E-1	1.11E+0	3.07E-2	-4.79E+0	-1.31E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.09E-1	4.20E-3	2.88E+0	3.40E+0	3.05E-3	6.82E-2	4.60E-4	-9.46E-1	2.52E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.09E-1	4.20E-3	2.88E+0	3.40E+0	3.05E-3	6.82E-2	4.60E-4	-9.46E-1	2.52E+0
PENRE	MJ	2.11E+1	5.85E-1	1.69E-1	2.19E+1	2.26E-1	1.49E+0	1.27E-2	-1.14E+1	1.22E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.11E+1	5.85E-1	1.69E-1	2.19E+1	2.26E-1	1.49E+0	1.27E-2	-1.14E+1	1.22E+1
PET	MJ	2.16E+1	5.89E-1	3.05E+0	2.53E+1	2.29E-1	1.56E+0	1.32E-2	-1.24E+1	1.47E+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	6.38E-3	3.53E-5	7.91E-4	7.21E-3	2.41E-5	8.06E-4	1.47E-5	-3.59E-3	4.47E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.00E-6	6.70E-7	1.02E-6	4.70E-6	5.44E-7	2.34E-6	1.45E-8	-2.91E-6	4.69E-6
NHWD	kg	2.79E-2	7.18E-3	1.89E-2	5.40E-2	1.32E-2	7.04E-2	5.27E-2	-9.87E-3	1.80E-1
RWD	kg	1.00E-5	3.80E-6	5.83E-7	1.44E-5	1.45E-6	5.48E-6	7.80E-8	-5.80E-6	1.56E-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	6.90E-1	6.90E-1	0	0	0	0	6.90E-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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