

Environmental Profile

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

Ecochain v4.3.1



Product: 3040129 - PPr Elbow 90°GY 32
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	1.05E-1	7.17E-3	2.65E-3	1.15E-1	2.27E-3	9.42E-2	1.07E-3	-5.82E-2	1.54E-1
GWP-f	kg CO2 eq	1.05E-1	7.17E-3	2.56E-3	1.14E-1	2.26E-3	9.04E-2	1.07E-3	-6.24E-2	1.46E-1
GWP-b	kg CO2 eq	9.60E-5	-1.12E-6	8.95E-5	1.84E-4	1.37E-6	3.76E-3	9.27E-7	4.22E-3	8.17E-3
GWP-luluc	kg CO2 eq	5.87E-5	4.49E-6	1.56E-6	6.48E-5	8.01E-7	1.31E-5	1.84E-8	-4.12E-5	3.75E-5
ODP	kg CFC11 eq	2.57E-9	1.47E-9	2.05E-10	4.24E-9	5.22E-10	1.83E-9	2.68E-11	-3.02E-9	3.60E-9
AP	mol H+ eq	3.96E-4	1.96E-4	1.63E-5	6.08E-4	1.29E-5	7.75E-5	6.40E-7	-1.74E-4	5.25E-4
EP-fw	kg P eq	2.01E-6	3.71E-8	2.05E-7	2.25E-6	1.86E-8	3.82E-7	8.42E-10	-9.75E-7	1.67E-6
EP-m	kg N eq	7.02E-5	4.89E-5	5.68E-6	1.25E-4	4.61E-6	2.34E-5	4.14E-7	-3.27E-5	1.20E-4
EP-T	mol N eq	7.82E-4	5.43E-4	3.85E-5	1.36E-3	5.08E-5	2.57E-4	2.60E-6	-3.64E-4	1.31E-3
POCP	kg NMVOC eq	3.38E-4	1.42E-4	1.26E-5	4.92E-4	1.45E-5	8.04E-5	9.74E-7	-1.54E-4	4.34E-4
ADP-f	MJ	3.49E+0	9.47E-2	2.54E-2	3.61E+0	3.47E-2	2.33E-1	1.96E-3	-1.83E+0	2.05E+0
ADP-mm	kg Sb eq	1.56E-6	7.81E-8	2.03E-7	1.84E-6	5.86E-8	3.00E-7	6.47E-10	-3.82E-7	1.82E-6
WDP	m3 depriv.	7.28E-2	1.81E-4	5.29E-3	7.83E-2	1.07E-4	4.47E-3	1.09E-5	-3.56E-2	4.73E-2
PM	disease inc.	3.57E-9	3.01E-10	2.24E-10	4.09E-9	2.04E-10	1.25E-9	1.34E-11	-1.67E-9	3.89E-9
IR	kBq U-235 eq	2.15E-3	4.04E-4	7.64E-5	2.63E-3	1.52E-4	7.17E-4	9.05E-6	-1.08E-3	2.42E-3
ETP-fw	CTUe	1.21E+0	6.61E-2	1.38E-1	1.41E+0	2.82E-2	2.74E-1	1.64E-3	-5.49E-1	1.17E+0
HTP-c	CTUh	2.70E-11	3.88E-12	8.38E-12	3.92E-11	1.00E-12	3.49E-11	4.85E-14	-1.19E-11	6.33E-11
HTP-nc	CTUh	7.46E-10	5.84E-11	1.48E-10	9.52E-10	3.36E-11	4.12E-10	1.06E-12	-3.43E-10	1.06E-9
SQP	Pt	3.49E-1	2.76E-2	3.40E-2	4.10E-1	2.97E-2	1.85E-1	5.02E-3	-8.38E-1	-2.09E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.66E-2	7.39E-4	4.62E-1	5.60E-1	4.99E-4	1.13E-2	7.52E-5	-1.64E-1	4.07E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.66E-2	7.39E-4	4.62E-1	5.60E-1	4.99E-4	1.13E-2	7.52E-5	-1.64E-1	4.07E-1
PENRE	MJ	3.75E+0	1.01E-1	2.70E-2	3.87E+0	3.69E-2	2.49E-1	2.08E-3	-1.97E+0	2.19E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.75E+0	1.01E-1	2.70E-2	3.87E+0	3.69E-2	2.49E-1	2.08E-3	-1.97E+0	2.19E+0
PET	MJ	3.84E+0	1.01E-1	4.90E-1	4.43E+0	3.74E-2	2.60E-1	2.15E-3	-2.14E+0	2.60E+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	1.22E-3	6.32E-6	1.27E-4	1.35E-3	3.93E-6	1.36E-4	2.41E-6	-6.05E-4	8.89E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.46E-7	1.21E-7	1.64E-7	8.31E-7	8.89E-8	3.94E-7	2.37E-9	-5.83E-7	7.33E-7
NHWD	kg	5.38E-3	1.46E-3	3.04E-3	9.87E-3	2.15E-3	1.24E-2	8.61E-3	-1.68E-3	3.14E-2
RWD	kg	1.88E-6	6.51E-7	9.35E-8	2.62E-6	2.36E-7	9.17E-7	1.28E-8	-1.00E-6	2.78E-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	1.11E-1	1.11E-1	0	0	0	0	1.11E-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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