

Environmental Profile

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

Ecochain v4.3.1



Product: 3050937 - PPr Elbow 45°WT 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	9.00E-2	5.96E-3	1.96E-3	9.80E-2	1.79E-3	8.17E-2	8.42E-4	-4.66E-2	1.36E-1
GWP-f	kg CO2 eq	9.01E-2	5.95E-3	1.89E-3	9.79E-2	1.79E-3	7.68E-2	8.42E-4	-5.21E-2	1.25E-1
GWP-b	kg CO2 eq	-2.33E-4	-6.33E-7	6.61E-5	-1.68E-4	1.09E-6	4.88E-3	7.28E-7	5.52E-3	1.02E-2
GWP-luluc	kg CO2 eq	2.09E-4	3.60E-6	1.15E-6	2.14E-4	6.34E-7	1.05E-5	1.52E-8	-4.79E-5	1.77E-4
ODP	kg CFC11 eq	3.18E-9	1.23E-9	1.52E-10	4.56E-9	4.12E-10	1.52E-9	2.12E-11	-2.71E-9	3.81E-9
AP	mol H+ eq	4.35E-4	1.52E-4	1.20E-5	5.99E-4	1.02E-5	6.41E-5	5.10E-7	-1.50E-4	5.24E-4
EP-fw	kg P eq	2.05E-6	3.30E-8	1.51E-7	2.24E-6	1.47E-8	3.08E-7	6.86E-10	-9.63E-7	1.60E-6
EP-m	kg N eq	6.80E-5	3.82E-5	4.19E-6	1.10E-4	3.65E-6	1.96E-5	3.23E-7	-2.86E-5	1.05E-4
EP-T	mol N eq	7.23E-4	4.25E-4	2.84E-5	1.18E-3	4.02E-5	2.15E-4	2.06E-6	-3.20E-4	1.11E-3
POCP	kg NMVOC eq	3.02E-4	1.11E-4	9.26E-6	4.23E-4	1.15E-5	6.71E-5	7.72E-7	-1.30E-4	3.72E-4
ADP-f	MJ	2.87E+0	7.96E-2	1.88E-2	2.97E+0	2.75E-2	1.89E-1	1.55E-3	-1.49E+0	1.69E+0
ADP-mm	kg Sb eq	1.12E-6	7.19E-8	1.50E-7	1.34E-6	4.63E-8	2.47E-7	5.21E-10	-3.17E-7	1.32E-6
WDP	m3 depriv.	6.45E-2	1.64E-4	3.90E-3	6.86E-2	8.43E-5	3.57E-3	1.09E-5	-3.14E-2	4.09E-2
PM	disease inc.	3.39E-9	2.73E-10	1.65E-10	3.83E-9	1.62E-10	1.03E-9	1.07E-11	-1.53E-9	3.50E-9
IR	kBq U-235 eq	2.16E-3	3.39E-4	5.64E-5	2.56E-3	1.20E-4	5.88E-4	7.14E-6	-9.99E-4	2.27E-3
ETP-fw	CTUe	1.40E+0	5.69E-2	1.02E-1	1.56E+0	2.23E-2	2.26E-1	1.30E-3	-6.01E-1	1.21E+0
HTP-c	CTUh	3.87E-11	3.17E-12	6.18E-12	4.80E-11	7.94E-13	3.01E-11	4.02E-14	-1.08E-11	6.82E-11
HTP-nc	CTUh	7.83E-10	5.17E-11	1.09E-10	9.44E-10	2.66E-11	3.42E-10	8.50E-13	-3.16E-10	9.97E-10
SQP	Pt	4.29E-1	2.73E-2	2.51E-2	4.81E-1	2.35E-2	1.49E-1	3.97E-3	-1.05E+0	-3.98E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.08E-1	6.49E-4	3.41E-1	4.50E-1	3.94E-4	9.08E-3	5.83E-5	-2.01E-1	2.58E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.08E-1	6.49E-4	3.41E-1	4.50E-1	3.94E-4	9.08E-3	5.83E-5	-2.01E-1	2.58E-1
PENRE	MJ	3.08E+0	8.45E-2	2.00E-2	3.18E+0	2.92E-2	2.02E-1	1.65E-3	-1.61E+0	1.81E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.08E+0	8.45E-2	2.00E-2	3.18E+0	2.92E-2	2.02E-1	1.65E-3	-1.61E+0	1.81E+0
PET	MJ	3.19E+0	8.51E-2	3.61E-1	3.63E+0	2.96E-2	2.11E-1	1.71E-3	-1.81E+0	2.06E+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	1.16E-3	5.69E-6	9.35E-5	1.26E-3	3.11E-6	1.10E-4	1.90E-6	-5.63E-4	8.13E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.35E-6	1.12E-7	1.21E-7	1.58E-6	7.03E-8	3.27E-7	1.90E-9	-5.20E-7	1.46E-6
NHWD	kg	8.76E-3	1.56E-3	2.24E-3	1.26E-2	1.70E-3	1.02E-2	6.81E-3	-1.51E-3	2.98E-2
RWD	kg	2.03E-6	5.44E-7	6.90E-8	2.64E-6	1.87E-7	7.55E-7	1.01E-8	-9.34E-7	2.66E-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	8.17E-2	8.17E-2	0	0	0	0	8.17E-2
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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