

Environmental Profile

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

Ecochain v4.3.1



Product: 3050933 - PPr Elbow 45°WT 20
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	4.04E-2	2.34E-3	6.31E-4	4.34E-2	6.85E-4	3.90E-2	3.21E-4	-2.05E-2	6.29E-2
GWP-f	kg CO2 eq	4.06E-2	2.34E-3	6.10E-4	4.35E-2	6.84E-4	3.73E-2	3.21E-4	-2.23E-2	5.96E-2
GWP-b	kg CO2 eq	-3.81E-4	-8.64E-8	2.13E-5	-3.60E-4	4.16E-7	1.62E-3	2.73E-7	1.83E-3	3.10E-3
GWP-luluc	kg CO2 eq	1.74E-4	1.35E-6	3.72E-7	1.76E-4	2.42E-7	4.07E-6	6.51E-9	-1.65E-5	1.64E-4
ODP	kg CFC11 eq	1.92E-9	4.86E-10	4.89E-11	2.46E-9	1.58E-10	5.96E-10	8.15E-12	-1.27E-9	1.95E-9
AP	mol H+ eq	2.51E-4	5.39E-5	3.88E-6	3.09E-4	3.90E-6	2.55E-5	1.99E-7	-5.80E-5	2.81E-4
EP-fw	kg P eq	1.09E-6	1.41E-8	4.87E-8	1.15E-6	5.63E-9	1.19E-7	2.84E-10	-3.50E-7	9.29E-7
EP-m	kg N eq	3.38E-5	1.37E-5	1.35E-6	4.89E-5	1.39E-6	7.92E-6	1.19E-7	-1.13E-5	4.71E-5
EP-T	mol N eq	3.49E-4	1.53E-4	9.16E-6	5.11E-4	1.54E-5	8.71E-5	7.97E-7	-1.26E-4	4.89E-4
POCP	kg NMVOC eq	1.44E-4	4.00E-5	2.99E-6	1.87E-4	4.39E-6	2.69E-5	2.98E-7	-5.13E-5	1.67E-4
ADP-f	MJ	1.20E+0	3.18E-2	6.06E-3	1.24E+0	1.05E-2	7.36E-2	5.99E-4	-6.12E-1	7.10E-1
ADP-mm	kg Sb eq	4.85E-7	3.21E-8	4.84E-8	5.66E-7	1.77E-8	9.55E-8	2.09E-10	-1.21E-7	5.58E-7
WDP	m3 depriv.	3.07E-2	7.18E-5	1.26E-3	3.21E-2	3.22E-5	1.38E-3	6.57E-6	-1.18E-2	2.17E-2
PM	disease inc.	1.67E-9	1.20E-10	5.33E-11	1.84E-9	6.18E-11	4.03E-10	4.12E-12	-5.69E-10	1.74E-9
IR	kBq U-235 eq	1.14E-3	1.35E-4	1.82E-5	1.29E-3	4.59E-5	2.28E-4	2.71E-6	-3.79E-4	1.19E-3
ETP-fw	CTUe	6.71E-1	2.35E-2	3.28E-2	7.27E-1	8.53E-3	8.86E-2	5.00E-4	-2.13E-1	6.12E-1
HTP-c	CTUh	2.63E-11	1.22E-12	1.99E-12	2.95E-11	3.04E-13	1.38E-11	1.73E-14	-4.14E-12	3.95E-11
HTP-nc	CTUh	4.37E-10	2.21E-11	3.52E-11	4.94E-10	1.02E-11	1.42E-10	3.39E-13	-1.18E-10	5.29E-10
SQP	Pt	2.09E-1	1.31E-2	8.09E-3	2.30E-1	8.99E-3	5.80E-2	1.52E-3	-3.55E-1	-5.58E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.05E-2	2.74E-4	1.10E-1	1.61E-1	1.51E-4	3.52E-3	2.12E-5	-6.80E-2	9.66E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.05E-2	2.74E-4	1.10E-1	1.61E-1	1.51E-4	3.52E-3	2.12E-5	-6.80E-2	9.66E-2
PENRE	MJ	1.29E+0	3.37E-2	6.44E-3	1.33E+0	1.12E-2	7.84E-2	6.36E-4	-6.62E-1	7.55E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.29E+0	3.37E-2	6.44E-3	1.33E+0	1.12E-2	7.84E-2	6.36E-4	-6.62E-1	7.55E-1
PET	MJ	1.34E+0	3.40E-2	1.17E-1	1.49E+0	1.13E-2	8.19E-2	6.57E-4	-7.30E-1	8.52E-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	6.08E-4	2.48E-6	3.02E-5	6.40E-4	1.19E-6	4.36E-5	7.21E-7	-2.09E-4	4.77E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.09E-6	4.97E-8	3.90E-8	1.18E-6	2.69E-8	1.30E-7	7.52E-10	-2.44E-7	1.09E-6
NHWD	kg	6.23E-3	8.07E-4	7.23E-4	7.76E-3	6.51E-4	4.33E-3	2.60E-3	-5.74E-4	1.48E-2
RWD	kg	1.12E-6	2.16E-7	2.23E-8	1.36E-6	7.14E-8	2.94E-7	3.86E-9	-3.59E-7	1.37E-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	2.64E-2	2.64E-2	0	0	0	0	2.64E-2
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777