

Environmental Profile

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

Ecochain v4.3.1



Product: 3050935 - PPr Elbow 45°WT 25
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	5.50E-2	3.46E-3	1.07E-3	5.96E-2	1.05E-3	5.03E-2	4.95E-4	-2.87E-2	8.27E-2
GWP-f	kg CO2 eq	5.52E-2	3.46E-3	1.04E-3	5.97E-2	1.05E-3	4.82E-2	4.95E-4	-3.12E-2	7.82E-2
GWP-b	kg CO2 eq	-3.08E-4	-3.06E-7	3.62E-5	-2.72E-4	6.39E-7	2.16E-3	4.25E-7	2.43E-3	4.32E-3
GWP-luluc	kg CO2 eq	1.81E-4	2.07E-6	6.32E-7	1.84E-4	3.73E-7	6.17E-6	9.42E-9	-2.25E-5	1.68E-4
ODP	kg CFC11 eq	2.23E-9	7.14E-10	8.31E-11	3.03E-9	2.43E-10	8.82E-10	1.25E-11	-1.63E-9	2.54E-9
AP	mol H+ eq	3.04E-4	8.60E-5	6.60E-6	3.96E-4	6.00E-6	3.74E-5	3.03E-7	-8.50E-5	3.55E-4
EP-fw	kg P eq	1.33E-6	1.96E-8	8.28E-8	1.43E-6	8.66E-9	1.80E-7	4.18E-10	-4.98E-7	1.12E-6
EP-m	kg N eq	4.31E-5	2.17E-5	2.30E-6	6.71E-5	2.15E-6	1.14E-5	1.87E-7	-1.62E-5	6.47E-5
EP-T	mol N eq	4.52E-4	2.41E-4	1.56E-5	7.09E-4	2.36E-5	1.26E-4	1.22E-6	-1.81E-4	6.79E-4
POCP	kg NMVOC eq	1.89E-4	6.31E-5	5.08E-6	2.57E-4	6.76E-6	3.91E-5	4.56E-7	-7.50E-5	2.29E-4
ADP-f	MJ	1.71E+0	4.65E-2	1.03E-2	1.77E+0	1.62E-2	1.11E-1	9.17E-4	-8.87E-1	1.01E+0
ADP-mm	kg Sb eq	6.77E-7	4.33E-8	8.23E-8	8.03E-7	2.72E-8	1.43E-7	3.13E-10	-1.82E-7	7.92E-7
WDP	m3 depriv.	4.08E-2	9.81E-5	2.14E-3	4.30E-2	4.96E-5	2.10E-3	8.03E-6	-1.74E-2	2.78E-2
PM	disease inc.	2.15E-9	1.64E-10	9.06E-11	2.40E-9	9.50E-11	5.98E-10	6.31E-12	-8.29E-10	2.27E-9
IR	kBq U-235 eq	1.42E-3	1.98E-4	3.09E-5	1.65E-3	7.06E-5	3.42E-4	4.19E-6	-5.43E-4	1.52E-3
ETP-fw	CTUe	8.18E-1	3.35E-2	5.57E-2	9.08E-1	1.31E-2	1.31E-1	7.66E-4	-2.94E-1	7.59E-1
HTP-c	CTUh	2.97E-11	1.83E-12	3.39E-12	3.49E-11	4.67E-13	1.88E-11	2.49E-14	-5.93E-12	4.83E-11
HTP-nc	CTUh	5.33E-10	3.08E-11	5.98E-11	6.23E-10	1.56E-11	2.04E-10	5.09E-13	-1.71E-10	6.73E-10
SQP	Pt	2.52E-1	1.68E-2	1.37E-2	2.82E-1	1.38E-2	8.73E-2	2.34E-3	-4.75E-1	-8.94E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.28E-2	3.84E-4	1.87E-1	2.50E-1	2.32E-4	5.32E-3	3.36E-5	-9.19E-2	1.64E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.28E-2	3.84E-4	1.87E-1	2.50E-1	2.32E-4	5.32E-3	3.36E-5	-9.19E-2	1.64E-1
PENRE	MJ	1.84E+0	4.93E-2	1.09E-2	1.90E+0	1.72E-2	1.18E-1	9.73E-4	-9.59E-1	1.07E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.84E+0	4.93E-2	1.09E-2	1.90E+0	1.72E-2	1.18E-1	9.73E-4	-9.59E-1	1.07E+0
PET	MJ	1.90E+0	4.97E-2	1.98E-1	2.15E+0	1.74E-2	1.23E-1	1.01E-3	-1.05E+0	1.24E+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	7.61E-4	3.40E-6	5.13E-5	8.16E-4	1.83E-6	6.48E-5	1.11E-6	-3.02E-4	5.82E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.16E-6	6.71E-8	6.63E-8	1.29E-6	4.13E-8	1.91E-7	1.13E-9	-3.14E-7	1.21E-6
NHWD	kg	6.86E-3	9.83E-4	1.23E-3	9.08E-3	1.00E-3	6.14E-3	4.00E-3	-8.31E-4	1.94E-2
RWD	kg	1.36E-6	3.17E-7	3.78E-8	1.72E-6	1.10E-7	4.38E-7	5.94E-9	-5.09E-7	1.76E-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	4.48E-2	4.48E-2	0	0	0	0	4.48E-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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