

# Environmental Profile

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

Ecochain v4.3.1



Product: 3050996 - PPr Tee 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

A1 Raw material supply A2 Transport A3 Manufacturing

## Construction process stage

A4 Transport gate to site  
 A5 Assembly / Construction installation process

## Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment  
 B6 Operational energy use B7 Operational water use

## End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing  
 C4 Disposal

## Benefits and loads beyond the system boundaries

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]; **PERT** = 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]

## Statement of Confidentiality

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.65E-2	3.54E-3	1.07E-3	6.11E-2	1.05E-3	5.25E-2	4.95E-4	-2.90E-2	8.62E-2
GWP-f	kg CO2 eq	5.67E-2	3.54E-3	1.04E-3	6.12E-2	1.05E-3	4.98E-2	4.95E-4	-3.20E-2	8.06E-2
GWP-b	kg CO2 eq	-3.21E-4	-2.70E-7	3.62E-5	-2.85E-4	6.39E-7	2.71E-3	4.25E-7	3.06E-3	5.49E-3
GWP-luluc	kg CO2 eq	1.86E-4	2.10E-6	6.32E-7	1.88E-4	3.73E-7	6.22E-6	9.42E-9	-2.69E-5	1.68E-4
ODP	kg CFC11 eq	2.33E-9	7.32E-10	8.31E-11	3.15E-9	2.43E-10	9.03E-10	1.25E-11	-1.72E-9	2.58E-9
AP	mol H+ eq	3.11E-4	8.65E-5	6.60E-6	4.04E-4	6.00E-6	3.83E-5	3.03E-7	-8.83E-5	3.60E-4
EP-fw	kg P eq	1.40E-6	2.04E-8	8.28E-8	1.50E-6	8.66E-9	1.82E-7	4.18E-10	-5.54E-7	1.14E-6
EP-m	kg N eq	4.49E-5	2.19E-5	2.30E-6	6.91E-5	2.15E-6	1.18E-5	1.87E-7	-1.70E-5	6.62E-5
EP-T	mol N eq	4.70E-4	2.43E-4	1.56E-5	7.29E-4	2.36E-5	1.29E-4	1.22E-6	-1.90E-4	6.93E-4
POCP	kg NMVOC eq	1.95E-4	6.36E-5	5.08E-6	2.64E-4	6.76E-6	4.02E-5	4.56E-7	-7.74E-5	2.34E-4
ADP-f	MJ	1.75E+0	4.77E-2	1.03E-2	1.80E+0	1.62E-2	1.12E-1	9.17E-4	-9.02E-1	1.03E+0
ADP-mm	kg Sb eq	6.93E-7	4.53E-8	8.23E-8	8.21E-7	2.72E-8	1.46E-7	3.13E-10	-1.86E-7	8.08E-7
WDP	m3 depriv.	4.17E-2	1.02E-4	2.14E-3	4.39E-2	4.96E-5	2.11E-3	8.03E-6	-1.83E-2	2.78E-2
PM	disease inc.	2.23E-9	1.71E-10	9.06E-11	2.49E-9	9.50E-11	6.10E-10	6.31E-12	-8.90E-10	2.31E-9
IR	kBq U-235 eq	1.47E-3	2.03E-4	3.09E-5	1.70E-3	7.06E-5	3.48E-4	4.19E-6	-5.85E-4	1.54E-3
ETP-fw	CTUe	9.09E-1	3.46E-2	5.57E-2	9.99E-1	1.31E-2	1.34E-1	7.66E-4	-3.42E-1	8.05E-1
HTP-c	CTUh	3.03E-11	1.87E-12	3.39E-12	3.55E-11	4.67E-13	1.92E-11	2.49E-14	-6.33E-12	4.89E-11
HTP-nc	CTUh	5.49E-10	3.19E-11	5.98E-11	6.41E-10	1.56E-11	2.08E-10	5.09E-13	-1.84E-10	6.81E-10
SQP	Pt	2.81E-1	1.78E-2	1.37E-2	3.12E-1	1.38E-2	8.82E-2	2.34E-3	-5.88E-1	-1.72E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.91E-2	3.98E-4	1.87E-1	2.57E-1	2.32E-4	5.37E-3	3.36E-5	-1.12E-1	1.50E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.91E-2	3.98E-4	1.87E-1	2.57E-1	2.32E-4	5.37E-3	3.36E-5	-1.12E-1	1.50E-1
PENRE	MJ	1.87E+0	5.06E-2	1.09E-2	1.93E+0	1.72E-2	1.19E-1	9.73E-4	-9.74E-1	1.10E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.87E+0	5.06E-2	1.09E-2	1.93E+0	1.72E-2	1.19E-1	9.73E-4	-9.74E-1	1.10E+0
PET	MJ	1.94E+0	5.10E-2	1.98E-1	2.19E+0	1.74E-2	1.25E-1	1.01E-3	-1.09E+0	1.25E+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	7.85E-4	3.54E-6	5.13E-5	8.40E-4	1.83E-6	6.56E-5	1.11E-6	-3.26E-4	5.82E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.17E-6	7.02E-8	6.63E-8	1.31E-6	4.13E-8	1.95E-7	1.13E-9	-3.31E-7	1.22E-6
NHWD	kg	7.04E-3	1.06E-3	1.23E-3	9.33E-3	1.00E-3	6.27E-3	4.00E-3	-8.84E-4	1.97E-2
RWD	kg	1.41E-6	3.25E-7	3.78E-8	1.78E-6	1.10E-7	4.47E-7	5.94E-9	-5.49E-7	1.79E-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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