

# Environmental Profile

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

Ecochain v3.5.64



Product: 3027830 - Tigris K1 T- Reduced 50x25x50  
 Unit: 1 Piece  
 Manufacturer: Wavin - DE - Twist - Handmade

LCA standard: EN15804+A2 (2019)  
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off  
 Externally verified: Yes  
 Issue date: 29-11-2022  
 End of validity: 29-11-2027  
 Verifier: Martijn van Hövell - SGS Search



Wavin Tigris K1 is proven and perfected to deliver high performance and significant cost savings in a wide range of commercial plumbing and heating projects. Its patented design has been relentlessly engineered to optimise all the benefits of a composite metal-plastic press-fit system and deliver the optimum solution for sanitary, potable water and heating applications, including re-circulating systems.

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 - DE - Twist - Handmade (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	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 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **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	Total
GWP-total	kg CO2 eq	1.99E+0	9.13E-3	3.02E-3	2.00E+0	2.00E+0
GWP-f	kg CO2 eq	2.16E+0	9.12E-3	2.22E-3	2.17E+0	2.17E+0
GWP-b	kg CO2 eq	-1.80E-1	5.54E-6	7.94E-4	-1.79E-1	-1.79E-1
GWP-luluc	kg CO2 eq	9.04E-3	3.23E-6	3.43E-6	9.05E-3	9.05E-3
ODP	kg CFC11 eq	3.43E-7	2.10E-9	3.39E-10	3.45E-7	3.45E-7
AP	mol H+ eq	1.24E-2	5.20E-5	1.84E-5	1.24E-2	1.24E-2
EP-fw	kg P eq	8.93E-5	7.51E-8	7.92E-8	8.94E-5	8.94E-5
EP-m	kg N eq	2.10E-3	1.86E-5	8.76E-6	2.13E-3	2.13E-3
EP-T	mol N eq	2.38E-2	2.05E-4	8.24E-5	2.40E-2	2.40E-2
POCP	kg NMVOC eq	9.37E-3	5.86E-5	2.30E-5	9.45E-3	9.45E-3
ADP-mm	kg Sb eq	6.43E-5	2.36E-7	1.64E-8	6.46E-5	6.46E-5
ADP-f	MJ	3.31E+1	1.40E-1	2.28E-2	3.33E+1	3.33E+1
WDP	m3 depriv.	1.39E+0	4.30E-4	2.98E-2	1.42E+0	1.42E+0
PM	disease inc.	1.35E-7	8.24E-10	4.81E-10	1.36E-7	1.36E-7
IR	kBq U-235 eq	7.86E-2	6.12E-4	1.11E-4	7.93E-2	7.93E-2
ETP-fw	CTUe	1.93E+2	1.14E-1	5.33E-2	1.94E+2	1.94E+2
HTP-c	CTUh	2.16E-8	4.05E-12	2.30E-12	2.16E-8	2.16E-8
HTP-nc	CTUh	7.17E-8	1.36E-10	3.94E-11	7.19E-8	7.19E-8
SQP	Pt	2.65E+1	1.20E-1	1.03E-2	2.66E+1	2.66E+1
Resource use	Unit	A1	A2	A3	A1-A3	Total
PERE	MJ	1.00E+1	2.01E-3	2.06E-3	1.00E+1	1.00E+1
PERM	MJ	0	0	0	0	0
PERT	MJ	1.00E+1	2.01E-3	2.06E-3	1.00E+1	1.00E+1
PENRE	MJ	3.54E+1	1.49E-1	2.39E-2	3.56E+1	3.56E+1
PENRM	MJ	0	0	0	0	0
PENRT	MJ	3.54E+1	1.49E-1	2.39E-2	3.56E+1	3.56E+1
PET	MJ	4.54E+1	1.51E-1	2.60E-2	4.56E+1	4.56E+1
SM	kg	0	0	0	0	0
RSF	MJ	0	0	0	0	0
NRSF	MJ	0	0	0	0	0
FW	m3	3.68E-2	1.58E-5	6.97E-4	3.75E-2	3.75E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	Total
HWD	kg	4.28E-5	3.58E-7	6.90E-8	4.32E-5	4.32E-5
NHWD	kg	1.56E+0	8.68E-3	5.73E-4	1.57E+0	1.57E+0
RWD	kg	7.47E-5	9.52E-7	1.70E-7	7.59E-5	7.59E-5
CRU	kg	0	0	0	0	0
MFR	kg	0	0	0	0	0
MER	kg	0	0	0	0	0
EE	MJ	0	0	0	0	0
EET	MJ	0	0	0	0	0
EEE	MJ	0	0	0	0	0



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