

# Environmental Profile

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

Ecochain v3.5.64



Product: 3027831 - Tigris K1 T- Reduced 50x40x50  
 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
<b>Product stage</b>					<b>Use stage</b>							<b>End-of-Life stage</b>				
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				
<b>Construction process stage</b>					<b>Benefits and loads beyond the system boundaries</b>											
A4 Transport gate to site A5 Assembly / Construction installation process					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	2.45E+0	1.01E-2	3.46E-3	2.46E+0	2.46E+0
GWP-f	kg CO2 eq	2.61E+0	1.01E-2	2.55E-3	2.63E+0	2.63E+0
GWP-b	kg CO2 eq	-1.77E-1	6.15E-6	9.11E-4	-1.76E-1	-1.76E-1
GWP-luluc	kg CO2 eq	1.06E-2	3.58E-6	3.93E-6	1.06E-2	1.06E-2
ODP	kg CFC11 eq	4.06E-7	2.33E-9	3.89E-10	4.08E-7	4.08E-7
AP	mol H+ eq	1.50E-2	5.77E-5	2.11E-5	1.51E-2	1.51E-2
EP-fw	kg P eq	1.08E-4	8.33E-8	9.08E-8	1.08E-4	1.08E-4
EP-m	kg N eq	2.54E-3	2.06E-5	1.00E-5	2.57E-3	2.57E-3
EP-T	mol N eq	2.87E-2	2.27E-4	9.45E-5	2.90E-2	2.90E-2
POCP	kg NMVOC eq	1.12E-2	6.50E-5	2.63E-5	1.13E-2	1.13E-2
ADP-mm	kg Sb eq	7.88E-5	2.62E-7	1.88E-8	7.91E-5	7.91E-5
ADP-f	MJ	3.97E+1	1.55E-1	2.62E-2	3.99E+1	3.99E+1
WDP	m3 depriv.	1.64E+0	4.77E-4	3.42E-2	1.68E+0	1.68E+0
PM	disease inc.	1.64E-7	9.14E-10	5.52E-10	1.65E-7	1.65E-7
IR	kBq U-235 eq	9.54E-2	6.79E-4	1.27E-4	9.62E-2	9.62E-2
ETP-fw	CTUe	2.28E+2	1.26E-1	6.11E-2	2.29E+2	2.29E+2
HTP-c	CTUh	2.65E-8	4.49E-12	2.64E-12	2.65E-8	2.65E-8
HTP-nc	CTUh	8.73E-8	1.50E-10	4.52E-11	8.75E-8	8.75E-8
SQP	Pt	2.85E+1	1.33E-1	1.18E-2	2.86E+1	2.86E+1
Resource use	Unit	A1	A2	A3	A1-A3	Total
PERE	MJ	1.15E+1	2.23E-3	2.36E-3	1.15E+1	1.15E+1
PERM	MJ	0	0	0	0	0
PERT	MJ	1.15E+1	2.23E-3	2.36E-3	1.15E+1	1.15E+1
PENRE	MJ	4.25E+1	1.65E-1	2.75E-2	4.27E+1	4.27E+1
PENRM	MJ	0	0	0	0	0
PENRT	MJ	4.25E+1	1.65E-1	2.75E-2	4.27E+1	4.27E+1
PET	MJ	5.40E+1	1.67E-1	2.98E-2	5.42E+1	5.42E+1
SM	kg	0	0	0	0	0
RSF	MJ	0	0	0	0	0
NRSF	MJ	0	0	0	0	0
FW	m3	4.35E-2	1.76E-5	7.99E-4	4.43E-2	4.43E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	Total
HWD	kg	5.18E-5	3.98E-7	7.91E-8	5.23E-5	5.23E-5
NHWD	kg	1.92E+0	9.63E-3	6.57E-4	1.93E+0	1.93E+0
RWD	kg	9.06E-5	1.06E-6	1.94E-7	9.19E-5	9.19E-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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