Environmental Profile

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

Ecochain v3.5.71

Product:	4064283 - Tigris M5 DRL Hep20 Adaptor 32x28
Unit:	1 piece
Manufacturer:	Wavin - UK - Doncaster - Verified

Suitable for various professional plumbing jobs. Hep20 is packed with unique features that make push-fit plumbing fitting easier quicker and more secure for installers. No additional equipment or tools required when installing or demounting fittings compared to others where a solder or glue is required. Just push the pipework into the fitting to create a watertight seal. A wide range of plastic fittings, plumbing pipes and tubes are available. It is the only system with joint recognition and se

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	09-02-2023
End of validity:	09-02-2028
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 - UK - Doncaster - Verified (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-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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.14E-1	7.51E-3	1.53E-3	3.23E-1	5.01E-3	4.17E-2	4.50E-4	-3.19E-1	5.16E-2
GWP-f	kg CO2 eq	3.14E-1	7.50E-3	1.53E-3	3.23E-1	5.00E-3	3.86E-2	4.49E-4	-3.22E-1	4.47E-2
GWP-b	kg CO2 eq	4.01E-4	4.44E-6	-1.61E-6	4.04E-4	3.04E-6	3.03E-3	5.34E-7	3.81E-3	7.24E-3
GWP-luluc	kg CO2 eq	6.16E-5	2.69E-6	1.93E-6	6.62E-5	1.77E-6	8.14E-6	3.05E-8	-3.83E-4	-3.07E-4
ODP	kg CFC11 eq	3.88E-9	1.73E-9	7.28E-11	5.67E-9	1.15E-9	1.26E-9	4.45E-11	-1.51E-8	-6.98E-9
AP	mol H+ eq	1.34E-3	4.64E-5	9.71E-6	1.39E-3	2.85E-5	6.69E-5	1.04E-6	-5.34E-3	-3.85E-3
EP-fw	kg P eq	4.60E-6	6.11E-8	2.33E-8	4.68E-6	4.12E-8	3.41E-7	1.27E-9	-4.30E-5	-3.79E-5
EP-m	kg N eq	2.77E-4	1.61E-5	1.39E-6	2.95E-4	1.02E-5	1.78E-5	7.42E-7	-6.63E-4	-3.40E-4
EP-T	mol N eq	2.79E-3	1.78E-4	1.63E-5	2.99E-3	1.12E-4	2.00E-4	4.00E-6	-8.89E-3	-5.59E-3
POCP	kg NMVOC eq	9.51E-4	5.05E-5	5.00E-6	1.01E-3	3.21E-5	5.84E-5	1.23E-6	-2.16E-3	-1.07E-3
ADP-mm	kg Sb eq	5.94E-6	1.92E-7	5.63E-8	6.19E-6	1.29E-7	2.77E-7	1.01E-9	-1.91E-3	-1.91E-3
ADP-f	MJ	3.85E+0	1.15E-1	1.72E-2	3.98E+0	7.68E-2	1.32E-1	3.08E-3	-4.16E+0	3.08E-2
WDP	m3 depriv.	1.08E-1	3.49E-4	3.83E-4	1.09E-1	2.36E-4	1.78E-3	1.08E-4	-2.10E-1	-9.93E-2
PM	disease inc.	1.20E-8	6.69E-10	7.11E-11	1.27E-8	4.52E-10	9.80E-10	2.04E-11	-2.28E-8	-8.66E-9
IR	kBq U-235 eq	1.60E-3	5.02E-4	2.59E-5	2.13E-3	3.36E-4	4.89E-4	1.32E-5	-1.41E-2	-1.12E-2
ETP-fw	CTUe	1.68E+0	9.29E-2	5.92E-2	1.83E+0	6.23E-2	3.26E-1	3.07E-3	-9.01E+1	-8.79E+1
HTP-c	CTUh	6.76E-11	3.34E-12	2.32E-12	7.32E-11	2.22E-12	1.81E-11	5.46E-14	-2.02E-9	-1.92E-9
HTP-nc	CTUh	1.14E-9	1.10E-10	5.29E-11	1.30E-9	7.43E-11	3.66E-10	1.70E-12	-1.28E-7	-1.27E-7
SQP	Pt	5.31E-1	9.70E-2	7.29E-3	6.36E-1	6.57E-2	1.52E-1	6.78E-3	-3.11E+0	-2.25E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.09E-1	1.63E-3	1.43E-1	2.53E-1	1.10E-3	1.04E-2	5.29E-5	-7.79E-1	-5.14E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.09E-1	1.63E-3	1.43E-1	2.53E-1	1.10E-3	1.04E-2	5.29E-5	-7.79E-1	-5.14E-1
PENRE	MJ	4.16E+0	1.22E-1	1.82E-2	4.30E+0	8.15E-2	1.41E-1	3.27E-3	-4.47E+0	5.42E-2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.16E+0	1.22E-1	1.82E-2	4.30E+0	8.15E-2	1.41E-1	3.27E-3	-4.47E+0	5.42E-2
PET	MJ	4.27E+0	1.24E-1	1.61E-1	4.55E+0	8.26E-2	1.51E-1	3.32E-3	-5.25E+0	-4.60E-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	2.59E-3	1.29E-5	1.33E-5	2.61E-3	8.69E-6	6.86E-5	3.42E-6	-5.58E-3	-2.88E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.46E-7	2.91E-7	4.57E-10	1.04E-6	1.96E-7	2.86E-7	4.37E-9	-2.40E-4	-2.39E-4
NHWD	kg	1.46E-2	7.01E-3	5.09E-6	2.17E-2	4.76E-3	6.06E-3	1.91E-2	-8.47E-2	-3.31E-2
RWD	kg	1.78E-6	7.81E-7	3.45E-10	2.56E-6	5.22E-7	6.13E-7	2.02E-8	-1.14E-5	-7.65E-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	0	0	0	0	0	0	0
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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