Environmental Profile

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

Ecochain v3.5.71

Product:	4064277 - Tigris M5 DRL Hep20 Adaptor 16x15
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	1.20E-1	2.67E-3	1.53E-3	1.24E-1	1.69E-3	1.80E-2	1.76E-4	-1.12E-1	3.21E-2
GWP-f	kg CO2 eq	1.20E-1	2.67E-3	1.53E-3	1.24E-1	1.69E-3	1.72E-2	1.76E-4	-1.13E-1	3.03E-2
GWP-b	kg CO2 eq	1.10E-4	1.58E-6	-1.61E-6	1.10E-4	1.02E-6	8.56E-4	2.04E-7	9.33E-4	1.90E-3
GWP-luluc	kg CO2 eq	2.36E-5	9.57E-7	1.93E-6	2.65E-5	5.96E-7	2.87E-6	1.05E-8	-1.23E-4	-9.33E-5
ODP	kg CFC11 eq	2.32E-9	6.13E-10	7.28E-11	3.00E-9	3.88E-10	4.45E-10	1.53E-11	-5.13E-9	-1.28E-9
AP	mol H+ eq	5.22E-4	1.65E-5	9.71E-6	5.48E-4	9.60E-6	2.34E-5	3.61E-7	-1.77E-3	-1.19E-3
EP-fw	kg P eq	1.84E-6	2.17E-8	2.33E-8	1.88E-6	1.39E-8	1.18E-7	4.40E-10	-1.41E-5	-1.21E-5
EP-m	kg N eq	1.06E-4	5.74E-6	1.39E-6	1.13E-4	3.43E-6	6.30E-6	2.80E-7	-2.22E-4	-9.86E-5
EP-T	mol N eq	1.10E-3	6.33E-5	1.63E-5	1.18E-3	3.79E-5	7.05E-5	1.39E-6	-2.96E-3	-1.67E-3
POCP	kg NMVOC eq	3.70E-4	1.80E-5	5.00E-6	3.93E-4	1.08E-5	2.06E-5	4.32E-7	-7.24E-4	-3.00E-4
ADP-mm	kg Sb eq	4.56E-6	6.80E-8	5.63E-8	4.69E-6	4.36E-8	9.47E-8	3.49E-10	-6.25E-4	-6.21E-4
ADP-f	MJ	1.52E+0	4.08E-2	1.72E-2	1.57E+0	2.59E-2	4.69E-2	1.06E-3	-1.45E+0	1.93E-1
WDP	m3 depriv.	4.19E-2	1.24E-4	3.83E-4	4.24E-2	7.94E-5	6.92E-4	3.57E-5	-7.01E-2	-2.69E-2
PM	disease inc.	4.77E-9	2.38E-10	7.11E-11	5.08E-9	1.52E-10	3.38E-10	7.08E-12	-7.64E-9	-2.06E-9
IR	kBq U-235 eq	9.13E-4	1.78E-4	2.59E-5	1.12E-3	1.13E-4	1.70E-4	4.58E-6	-4.63E-3	-3.22E-3
ETP-fw	CTUe	6.73E-1	3.30E-2	5.92E-2	7.66E-1	2.10E-2	1.17E-1	1.13E-3	-2.95E+1	-2.86E+1
HTP-c	CTUh	3.21E-11	1.19E-12	2.32E-12	3.56E-11	7.48E-13	6.38E-12	1.94E-14	-6.60E-10	-6.18E-10
HTP-nc	CTUh	5.29E-10	3.92E-11	5.29E-11	6.21E-10	2.50E-11	1.28E-10	6.07E-13	-4.20E-8	-4.12E-8
SQP	Pt	2.47E-1	3.44E-2	7.29E-3	2.89E-1	2.21E-2	5.25E-2	2.36E-3	-9.65E-1	-5.98E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.00E-2	5.80E-4	1.43E-1	1.83E-1	3.71E-4	3.59E-3	2.00E-5	-2.45E-1	-5.82E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.00E-2	5.80E-4	1.43E-1	1.83E-1	3.71E-4	3.59E-3	2.00E-5	-2.45E-1	-5.82E-2
PENRE	MJ	1.63E+0	4.33E-2	1.82E-2	1.70E+0	2.75E-2	4.98E-2	1.13E-3	-1.56E+0	2.13E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.63E+0	4.33E-2	1.82E-2	1.70E+0	2.75E-2	4.98E-2	1.13E-3	-1.56E+0	2.13E-1
PET	MJ	1.67E+0	4.39E-2	1.61E-1	1.88E+0	2.78E-2	5.34E-2	1.15E-3	-1.81E+0	1.54E-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	1.01E-3	4.57E-6	1.33E-5	1.03E-3	2.93E-6	2.90E-5	1.19E-6	-1.86E-3	-7.95E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.16E-7	1.03E-7	4.57E-10	6.19E-7	6.62E-8	1.02E-7	1.50E-9	-7.86E-5	-7.78E-5
NHWD	kg	7.34E-3	2.49E-3	5.09E-6	9.84E-3	1.60E-3	2.22E-3	6.50E-3	-2.77E-2	-7.57E-3
RWD	kg	1.09E-6	2.78E-7	3.45E-10	1.37E-6	1.76E-7	2.13E-7	7.00E-9	-3.73E-6	-1.96E-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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