Environmental Profile

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

Ecochain v3.5.71

Product:	3030693 - Hep20 Stopcock Cold Water 15 PF/PF
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	7.03E-1	5.49E-3	6.28E-2	7.72E-1	3.43E-3	6.12E-2	3.42E-4	-2.22E-1	6.15E-1
GWP-f	kg CO2 eq	7.15E-1	5.48E-3	5.81E-2	7.79E-1	3.42E-3	2.81E-2	3.42E-4	-2.29E-1	5.81E-1
GWP-b	kg CO2 eq	-1.26E-2	3.25E-6	4.71E-3	-7.89E-3	2.08E-6	3.30E-2	3.99E-7	7.95E-3	3.31E-2
GWP-luluc	kg CO2 eq	8.87E-4	1.97E-6	1.93E-5	9.09E-4	1.21E-6	3.81E-7	2.13E-8	-3.70E-4	5.40E-4
ODP	kg CFC11 eq	3.77E-8	1.26E-9	6.83E-9	4.57E-8	7.89E-10	9.09E-10	3.10E-11	-1.14E-8	3.61E-8
AP	mol H+ eq	4.40E-2	3.38E-5	1.29E-4	4.42E-2	1.95E-5	4.37E-5	7.28E-7	-3.69E-3	4.05E-2
EP-fw	kg P eq	3.49E-4	4.47E-8	3.84E-7	3.50E-4	2.82E-8	1.74E-7	8.88E-10	-3.04E-5	3.19E-4
EP-m	kg N eq	2.40E-3	1.18E-5	2.87E-5	2.44E-3	6.98E-6	1.25E-5	5.50E-7	-4.67E-4	1.99E-3
EP-T	mol N eq	3.43E-2	1.30E-4	2.72E-4	3.47E-2	7.69E-5	1.38E-4	2.80E-6	-6.22E-3	2.87E-2
POCP	kg NMVOC eq	9.25E-3	3.68E-5	8.86E-5	9.37E-3	2.20E-5	3.75E-5	8.69E-7	-1.52E-3	7.91E-3
ADP-mm	kg Sb eq	2.76E-3	1.40E-7	5.16E-7	2.76E-3	8.86E-8	1.94E-7	7.05E-10	-1.29E-3	1.48E-3
ADP-f	MJ	8.47E+0	8.39E-2	8.27E-1	9.38E+0	5.25E-2	7.78E-2	2.15E-3	-2.99E+0	6.53E+0
WDP	m3 depriv.	4.87E-1	2.55E-4	7.72E-3	4.95E-1	1.61E-4	9.67E-4	7.33E-5	-1.66E-1	3.30E-1
PM	disease inc.	1.05E-7	4.89E-10	9.44E-10	1.07E-7	3.09E-10	5.67E-10	1.43E-11	-1.70E-8	9.06E-8
IR	kBq U-235 eq	2.49E-2	3.67E-4	6.82E-4	2.59E-2	2.30E-4	3.23E-4	9.24E-6	-1.05E-2	1.60E-2
ETP-fw	CTUe	4.30E+2	6.79E-2	6.47E-1	4.30E+2	4.27E-2	2.21E-1	2.23E-3	-6.19E+1	3.69E+2
HTP-c	CTUh	6.25E-9	2.44E-12	2.71E-11	6.27E-9	1.52E-12	9.66E-12	3.88E-14	-1.37E-9	4.92E-9
HTP-nc	CTUh	5.00E-7	8.07E-11	5.63E-10	5.00E-7	5.09E-11	2.41E-10	1.21E-12	-8.67E-8	4.14E-7
SQP	Pt	8.68E+0	7.09E-2	9.29E-2	8.85E+0	4.50E-2	-7.78E-1	4.76E-3	-5.02E+0	3.10E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.75E+0	1.19E-3	1.20E+0	2.95E+0	7.54E-4	-1.21E-1	3.93E-5	-1.06E+0	1.77E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.75E+0	1.19E-3	1.20E+0	2.95E+0	7.54E-4	-1.21E-1	3.93E-5	-1.06E+0	1.77E+0
PENRE	MJ	9.07E+0	8.91E-2	9.08E-1	1.01E+1	5.58E-2	8.26E-2	2.28E-3	-3.20E+0	7.00E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.07E+0	8.91E-2	9.08E-1	1.01E+1	5.58E-2	8.26E-2	2.28E-3	-3.20E+0	7.00E+0
PET	MJ	1.08E+1	9.03E-2	2.11E+0	1.30E+1	5.65E-2	-3.88E-2	2.32E-3	-4.26E+0	8.77E+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	1.28E-2	9.42E-6	2.27E-4	1.30E-2	5.95E-6	4.71E-5	2.40E-6	-4.38E-3	8.70E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.44E-4	2.13E-7	9.09E-7	3.46E-4	1.34E-7	1.71E-7	3.04E-9	-1.62E-4	1.84E-4
NHWD	kg	1.79E-1	5.13E-3	4.23E-3	1.89E-1	3.26E-3	4.27E-3	1.32E-2	-5.83E-2	1.51E-1
RWD	kg	2.17E-5	5.71E-7	6.87E-7	2.30E-5	3.57E-7	4.23E-7	1.41E-8	-8.62E-6	1.52E-5
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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