

Environmental Profile

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

Ecochain v3.5.71



Product: 3030704 - Hep20 Strght Service Valve 15x1/2 PF/TF
Unit: 1 piece
Manufacturer: Wavin - UK - Doncaster - Verified

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



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



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					Use stage							End-of-Life stage				
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				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site																
A5 Assembly / Construction installation process												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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.50E-1	2.78E-3	3.10E-2	3.84E-1	1.69E-3	3.09E-2	1.76E-4	-1.12E-1	3.05E-1
GWP-f	kg CO2 eq	3.56E-1	2.78E-3	2.86E-2	3.87E-1	1.69E-3	1.44E-2	1.76E-4	-1.15E-1	2.88E-1
GWP-b	kg CO2 eq	-6.29E-3	1.65E-6	2.32E-3	-3.97E-3	1.02E-6	1.65E-2	2.04E-7	4.00E-3	1.66E-2
GWP-luluc	kg CO2 eq	4.33E-4	9.98E-7	9.56E-6	4.44E-4	5.96E-7	2.38E-7	1.05E-8	-1.82E-4	2.63E-4
ODP	kg CFC11 eq	1.84E-8	6.39E-10	3.36E-9	2.24E-8	3.88E-10	4.61E-10	1.53E-11	-5.58E-9	1.77E-8
AP	mol H+ eq	2.14E-2	1.72E-5	6.36E-5	2.15E-2	9.60E-6	2.19E-5	3.61E-7	-1.81E-3	1.97E-2
EP-fw	kg P eq	1.70E-4	2.27E-8	1.90E-7	1.70E-4	1.39E-8	8.74E-8	4.40E-10	-1.48E-5	1.55E-4
EP-m	kg N eq	1.17E-3	5.97E-6	1.42E-5	1.19E-3	3.43E-6	6.29E-6	2.80E-7	-2.31E-4	9.73E-4
EP-T	mol N eq	1.68E-2	6.59E-5	1.34E-4	1.70E-2	3.79E-5	6.98E-5	1.39E-6	-3.06E-3	1.40E-2
POCP	kg NMVOC eq	4.52E-3	1.87E-5	4.38E-5	4.58E-3	1.08E-5	1.89E-5	4.32E-7	-7.49E-4	3.86E-3
ADP-mm	kg Sb eq	1.34E-3	7.10E-8	2.56E-7	1.34E-3	4.36E-8	9.72E-8	3.49E-10	-6.25E-4	7.17E-4
ADP-f	MJ	4.22E+0	4.26E-2	4.08E-1	4.67E+0	2.59E-2	3.98E-2	1.06E-3	-1.50E+0	3.23E+0
WDP	m3 depriv.	2.39E-1	1.30E-4	3.81E-3	2.43E-1	7.94E-5	5.11E-4	3.57E-5	-8.20E-2	1.62E-1
PM	disease inc.	5.15E-8	2.48E-10	4.67E-10	5.22E-8	1.52E-10	2.86E-10	7.08E-12	-8.43E-9	4.42E-8
IR	kBq U-235 eq	1.21E-2	1.86E-4	3.37E-4	1.27E-2	1.13E-4	1.64E-4	4.58E-6	-5.14E-3	7.81E-3
ETP-fw	CTUe	2.09E+2	3.44E-2	3.20E-1	2.09E+2	2.10E-2	1.11E-1	1.13E-3	-3.01E+1	1.79E+2
HTP-c	CTUh	3.04E-9	1.24E-12	1.34E-11	3.05E-9	7.48E-13	4.97E-12	1.94E-14	-6.65E-10	2.39E-9
HTP-nc	CTUh	2.43E-7	4.09E-11	2.79E-10	2.43E-7	2.50E-11	1.21E-10	6.07E-13	-4.21E-8	2.01E-7
SQP	Pt	4.25E+0	3.60E-2	4.60E-2	4.33E+0	2.21E-2	-3.89E-1	2.36E-3	-2.49E+0	1.48E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.54E-1	6.06E-4	5.98E-1	1.45E+0	3.71E-4	-6.07E-2	2.00E-5	-5.24E-1	8.68E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.54E-1	6.06E-4	5.98E-1	1.45E+0	3.71E-4	-6.07E-2	2.00E-5	-5.24E-1	8.68E-1
PENRE	MJ	4.51E+0	4.52E-2	4.47E-1	5.00E+0	2.75E-2	4.23E-2	1.13E-3	-1.61E+0	3.46E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.51E+0	4.52E-2	4.47E-1	5.00E+0	2.75E-2	4.23E-2	1.13E-3	-1.61E+0	3.46E+0
PET	MJ	5.37E+0	4.58E-2	1.04E+0	6.46E+0	2.78E-2	-1.84E-2	1.15E-3	-2.13E+0	4.33E+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	6.28E-3	4.78E-6	1.12E-4	6.40E-3	2.93E-6	2.43E-5	1.19E-6	-2.17E-3	4.26E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.67E-4	1.08E-7	4.47E-7	1.68E-4	6.62E-8	8.67E-8	1.50E-9	-7.87E-5	8.94E-5
NHWD	kg	8.74E-2	2.60E-3	2.08E-3	9.21E-2	1.60E-3	2.19E-3	6.50E-3	-2.84E-2	7.40E-2
RWD	kg	1.06E-5	2.90E-7	3.38E-7	1.12E-5	1.76E-7	2.14E-7	7.00E-9	-4.21E-6	7.43E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777