

Environmental Profile

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

Ecochain v3.5.71



Product: 3030708 - Hep20 Shut Off Valve Hot/Cold 15 PF/PF
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	4.08E-1	4.55E-3	3.49E-2	4.47E-1	1.71E-3	4.34E-2	3.08E-4	-1.52E-1	3.40E-1
GWP-f	kg CO2 eq	4.14E-1	4.55E-3	3.25E-2	4.51E-1	1.71E-3	2.69E-2	3.08E-4	-1.56E-1	3.23E-1
GWP-b	kg CO2 eq	-6.21E-3	2.68E-6	2.38E-3	-3.82E-3	1.04E-6	1.65E-2	3.31E-7	4.13E-3	1.68E-2
GWP-luluc	kg CO2 eq	3.70E-4	1.64E-6	1.36E-5	3.86E-4	6.06E-7	1.63E-6	1.17E-8	-1.62E-4	2.26E-4
ODP	kg CFC11 eq	1.72E-8	1.05E-9	3.60E-9	2.19E-8	3.95E-10	6.66E-10	1.69E-11	-5.33E-9	1.76E-8
AP	mol H+ eq	1.78E-2	2.85E-5	8.44E-5	1.80E-2	9.75E-6	2.92E-5	4.03E-7	-1.68E-3	1.63E-2
EP-fw	kg P eq	1.39E-4	3.70E-8	2.41E-7	1.39E-4	1.41E-8	1.22E-7	5.04E-10	-1.28E-5	1.27E-4
EP-m	kg N eq	1.06E-3	9.86E-6	1.73E-5	1.09E-3	3.49E-6	8.66E-6	4.38E-7	-2.37E-4	8.61E-4
EP-T	mol N eq	1.46E-2	1.09E-4	1.70E-4	1.49E-2	3.85E-5	9.54E-5	1.57E-6	-2.98E-3	1.21E-2
POCP	kg NMVOC eq	4.03E-3	3.08E-5	5.48E-5	4.12E-3	1.10E-5	2.69E-5	5.11E-7	-7.78E-4	3.38E-3
ADP-mm	kg Sb eq	1.09E-3	1.16E-7	3.73E-7	1.09E-3	4.43E-8	1.21E-7	3.91E-10	-5.06E-4	5.83E-4
ADP-f	MJ	4.97E+0	6.96E-2	4.53E-1	5.49E+0	2.63E-2	6.44E-2	1.19E-3	-1.97E+0	3.61E+0
WDP	m3 depriv.	2.36E-1	2.12E-4	4.67E-3	2.41E-1	8.07E-5	1.13E-3	3.04E-5	-8.63E-2	1.56E-1
PM	disease inc.	4.65E-8	4.05E-10	6.19E-10	4.75E-8	1.55E-10	3.96E-10	7.99E-12	-8.96E-9	3.91E-8
IR	kBq U-235 eq	1.07E-2	3.04E-4	3.97E-4	1.14E-2	1.15E-4	2.33E-4	5.31E-6	-4.33E-3	7.42E-3
ETP-fw	CTUe	1.69E+2	5.63E-2	4.45E-1	1.70E+2	2.13E-2	1.49E-1	1.61E-3	-2.45E+1	1.45E+2
HTP-c	CTUh	2.48E-9	2.03E-12	1.83E-11	2.50E-9	7.60E-13	8.41E-12	2.45E-14	-5.44E-10	1.97E-9
HTP-nc	CTUh	1.97E-7	6.68E-11	3.90E-10	1.97E-7	2.54E-11	1.59E-10	7.74E-13	-3.42E-8	1.63E-7
SQP	Pt	3.71E+0	5.87E-2	6.15E-2	3.83E+0	2.25E-2	-3.73E-1	2.76E-3	-2.38E+0	1.10E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.42E-1	9.89E-4	8.92E-1	1.64E+0	3.77E-4	-5.97E-2	3.15E-5	-4.94E-1	1.08E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.42E-1	9.89E-4	8.92E-1	1.64E+0	3.77E-4	-5.97E-2	3.15E-5	-4.94E-1	1.08E+0
PENRE	MJ	5.33E+0	7.39E-2	4.96E-1	5.90E+0	2.79E-2	6.85E-2	1.27E-3	-2.12E+0	3.88E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.33E+0	7.39E-2	4.96E-1	5.90E+0	2.79E-2	6.85E-2	1.27E-3	-2.12E+0	3.88E+0
PET	MJ	6.07E+0	7.49E-2	1.39E+0	7.54E+0	2.83E-2	8.84E-3	1.30E-3	-2.62E+0	4.96E+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	6.11E-3	7.80E-6	1.41E-4	6.26E-3	2.97E-6	4.68E-5	1.38E-6	-2.23E-3	4.09E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.36E-4	1.76E-7	4.61E-7	1.36E-4	6.72E-8	1.27E-7	1.61E-9	-6.37E-5	7.26E-5
NHWD	kg	7.61E-2	4.24E-3	2.15E-3	8.25E-2	1.63E-3	3.51E-3	6.70E-3	-2.36E-2	7.07E-2
RWD	kg	9.67E-6	4.74E-7	3.49E-7	1.05E-5	1.79E-7	3.02E-7	7.85E-9	-3.59E-6	7.40E-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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