

Environmental Profile

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

Ecochain v3.5.71



Product: 3031730 - Hep20 Ball Valve Red Lever 28x28 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	3.28E+0	2.01E-2	2.74E-1	3.57E+0	1.74E-2	6.48E-2	1.04E-3	-9.28E-1	2.72E+0
GWP-f	kg CO2 eq	3.27E+0	2.00E-2	2.51E-1	3.54E+0	1.74E-2	6.54E-2	1.04E-3	-9.14E-1	2.71E+0
GWP-b	kg CO2 eq	2.02E-3	1.19E-5	2.25E-2	2.45E-2	1.06E-5	-6.43E-4	1.35E-6	-1.29E-2	1.10E-2
GWP-luluc	kg CO2 eq	4.22E-3	7.16E-6	5.92E-5	4.29E-3	6.16E-6	2.13E-5	1.02E-7	-1.25E-3	3.07E-3
ODP	kg CFC11 eq	1.81E-7	4.61E-9	3.14E-8	2.17E-7	4.01E-9	3.09E-9	1.50E-10	-5.10E-8	1.73E-7
AP	mol H+ eq	2.43E-1	1.21E-4	4.49E-4	2.44E-1	9.91E-5	1.86E-4	3.49E-6	-1.91E-2	2.25E-1
EP-fw	kg P eq	1.94E-3	1.64E-7	1.44E-6	1.94E-3	1.43E-7	1.00E-6	4.19E-9	-1.57E-4	1.79E-3
EP-m	kg N eq	1.27E-2	4.25E-5	1.13E-4	1.29E-2	3.55E-5	4.59E-5	1.95E-6	-2.25E-3	1.07E-2
EP-T	mol N eq	1.85E-1	4.68E-4	1.02E-3	1.86E-1	3.91E-4	5.20E-4	1.33E-5	-3.10E-2	1.56E-1
POCP	kg NMVOC eq	4.94E-2	1.33E-4	3.38E-4	4.99E-2	1.12E-4	1.49E-4	4.01E-6	-7.32E-3	4.28E-2
ADP-mm	kg Sb eq	1.55E-2	5.13E-7	1.50E-6	1.55E-2	4.50E-7	7.98E-7	3.37E-9	-7.21E-3	8.25E-3
ADP-f	MJ	3.78E+1	3.07E-1	3.66E+0	4.18E+1	2.67E-1	3.23E-1	1.03E-2	-1.20E+1	3.04E+1
WDP	m3 depriv.	2.47E+0	9.36E-4	3.03E-2	2.50E+0	8.20E-4	3.31E-3	4.03E-4	-6.76E-1	1.83E+0
PM	disease inc.	5.56E-7	1.79E-9	3.29E-9	5.61E-7	1.57E-9	2.70E-9	6.81E-11	-7.48E-8	4.90E-7
IR	kBq U-235 eq	1.28E-1	1.34E-3	2.82E-3	1.33E-1	1.17E-3	1.27E-3	4.32E-5	-5.14E-2	8.37E-2
ETP-fw	CTUe	2.39E+3	2.49E-1	2.08E+0	2.39E+3	2.17E-1	9.35E-1	8.79E-3	-3.38E+2	2.06E+3
HTP-c	CTUh	3.48E-8	8.91E-12	9.00E-11	3.49E-8	7.72E-12	4.07E-11	1.71E-13	-7.58E-9	2.74E-8
HTP-nc	CTUh	2.80E-6	2.96E-10	1.78E-9	2.80E-6	2.59E-10	1.04E-9	5.30E-12	-4.83E-7	2.32E-6
SQP	Pt	3.71E+1	2.60E-1	3.19E-1	3.77E+1	2.29E-1	4.43E-1	2.22E-2	-6.75E+0	3.17E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.79E+0	4.38E-3	3.31E+0	1.11E+1	3.83E-3	3.10E-2	1.38E-4	-2.02E+0	9.12E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.79E+0	4.38E-3	3.31E+0	1.11E+1	3.83E-3	3.10E-2	1.38E-4	-2.02E+0	9.12E+0
PENRE	MJ	4.04E+1	3.26E-1	4.02E+0	4.47E+1	2.84E-1	3.44E-1	1.09E-2	-1.28E+1	3.25E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.04E+1	3.26E-1	4.02E+0	4.47E+1	2.84E-1	3.44E-1	1.09E-2	-1.28E+1	3.25E+1
PET	MJ	4.81E+1	3.30E-1	7.34E+0	5.58E+1	2.87E-1	3.75E-1	1.11E-2	-1.48E+1	4.17E+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	6.50E-2	3.45E-5	8.58E-4	6.59E-2	3.02E-5	1.42E-4	1.12E-5	-1.82E-2	4.78E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.93E-3	7.79E-7	4.33E-6	1.93E-3	6.83E-7	7.51E-7	1.49E-8	-9.06E-4	1.03E-3
NHWD	kg	9.53E-1	1.88E-2	2.01E-2	9.92E-1	1.66E-2	1.31E-2	6.63E-2	-3.15E-1	7.74E-1
RWD	kg	1.09E-4	2.09E-6	3.28E-6	1.14E-4	1.82E-6	1.57E-6	6.76E-8	-4.10E-5	7.67E-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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