

Environmental Profile

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

Ecochain v3.5.71



Product: 3031371 - Hep20 Brass Elbow 90° 22x3/4 PF/TM
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	1.25E+0	7.44E-3	1.17E-1	1.38E+0	6.72E-3	2.43E-2	3.75E-4	-3.48E-1	1.06E+0
GWP-f	kg CO2 eq	1.25E+0	7.44E-3	1.08E-1	1.36E+0	6.71E-3	2.45E-2	3.75E-4	-3.42E-1	1.05E+0
GWP-b	kg CO2 eq	7.23E-4	4.44E-6	9.62E-3	1.04E-2	4.08E-6	-2.47E-4	4.97E-7	-5.00E-3	5.11E-3
GWP-luluc	kg CO2 eq	1.65E-3	2.66E-6	2.56E-5	1.68E-3	2.38E-6	7.85E-6	3.92E-8	-4.88E-4	1.20E-3
ODP	kg CFC11 eq	7.08E-8	1.71E-9	1.34E-8	8.59E-8	1.55E-9	1.14E-9	5.76E-11	-1.98E-8	6.88E-8
AP	mol H+ eq	9.48E-2	4.48E-5	1.93E-4	9.51E-2	3.82E-5	7.02E-5	1.34E-6	-7.39E-3	8.78E-2
EP-fw	kg P eq	7.57E-4	6.08E-8	6.18E-7	7.58E-4	5.52E-8	3.78E-7	1.61E-9	-6.11E-5	6.97E-4
EP-m	kg N eq	4.93E-3	1.57E-5	4.86E-5	4.99E-3	1.37E-5	1.72E-5	7.25E-7	-8.67E-4	4.16E-3
EP-T	mol N eq	7.19E-2	1.73E-4	4.38E-4	7.25E-2	1.51E-4	1.95E-4	5.11E-6	-1.20E-2	6.09E-2
POCP	kg NMVOC eq	1.92E-2	4.93E-5	1.45E-4	1.94E-2	4.31E-5	5.59E-5	1.54E-6	-2.82E-3	1.67E-2
ADP-mm	kg Sb eq	6.03E-3	1.91E-7	6.51E-7	6.03E-3	1.74E-7	3.02E-7	1.29E-9	-2.81E-3	3.22E-3
ADP-f	MJ	1.45E+1	1.14E-1	1.57E+0	1.61E+1	1.03E-1	1.18E-1	3.95E-3	-4.50E+0	1.19E+1
WDP	m3 depriv.	9.54E-1	3.48E-4	1.30E-2	9.68E-1	3.16E-4	1.14E-3	1.57E-4	-2.60E-1	7.10E-1
PM	disease inc.	2.16E-7	6.66E-10	1.42E-9	2.18E-7	6.06E-10	1.01E-9	2.61E-11	-2.87E-8	1.91E-7
IR	kBq U-235 eq	5.02E-2	4.98E-4	1.21E-3	5.19E-2	4.50E-4	4.74E-4	1.66E-5	-2.00E-2	3.28E-2
ETP-fw	CTUe	9.33E+2	9.23E-2	8.96E-1	9.34E+2	8.37E-2	3.55E-1	3.30E-3	-1.32E+2	8.02E+2
HTP-c	CTUh	1.36E-8	3.31E-12	3.88E-11	1.36E-8	2.98E-12	1.48E-11	6.50E-14	-2.95E-9	1.07E-8
HTP-nc	CTUh	1.09E-6	1.10E-10	7.70E-10	1.09E-6	9.98E-11	3.93E-10	2.02E-12	-1.88E-7	9.04E-7
SQP	Pt	1.45E+1	9.66E-2	1.37E-1	1.47E+1	8.82E-2	1.67E-1	8.51E-3	-2.63E+0	1.24E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.04E+0	1.63E-3	1.44E+0	4.48E+0	1.48E-3	1.17E-2	5.12E-5	-7.88E-1	3.70E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.04E+0	1.63E-3	1.44E+0	4.48E+0	1.48E-3	1.17E-2	5.12E-5	-7.88E-1	3.70E+0
PENRE	MJ	1.54E+1	1.21E-1	1.72E+0	1.73E+1	1.09E-1	1.26E-1	4.20E-3	-4.81E+0	1.27E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.54E+1	1.21E-1	1.72E+0	1.73E+1	1.09E-1	1.26E-1	4.20E-3	-4.81E+0	1.27E+1
PET	MJ	1.85E+1	1.23E-1	3.16E+0	2.17E+1	1.11E-1	1.38E-1	4.25E-3	-5.60E+0	1.64E+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	2.51E-2	1.28E-5	3.68E-4	2.55E-2	1.17E-5	5.23E-5	4.31E-6	-7.00E-3	1.86E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.52E-4	2.89E-7	1.85E-6	7.54E-4	2.64E-7	2.81E-7	5.75E-9	-3.53E-4	4.01E-4
NHWD	kg	3.72E-1	6.99E-3	8.61E-3	3.88E-1	6.39E-3	4.77E-3	2.56E-2	-1.23E-1	3.02E-1
RWD	kg	4.26E-5	7.75E-7	1.40E-6	4.47E-5	7.01E-7	5.85E-7	2.60E-8	-1.60E-5	3.01E-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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