

Environmental Profile

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

Ecochain v3.5.71



Product: 3031370 - Hep20 Brass Elbow 90° 22x1/2 PF/TF
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					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	1.51E+0	8.59E-3	1.40E-1	1.66E+0	8.25E-3	2.53E-2	4.06E-4	-4.09E-1	1.28E+0
GWP-f	kg CO2 eq	1.51E+0	8.58E-3	1.28E-1	1.64E+0	8.24E-3	2.56E-2	4.05E-4	-4.02E-1	1.28E+0
GWP-b	kg CO2 eq	8.21E-4	5.14E-6	1.15E-2	1.23E-2	5.00E-6	-3.04E-4	5.58E-7	-6.20E-3	5.81E-3
GWP-luluc	kg CO2 eq	2.05E-3	3.06E-6	3.01E-5	2.09E-3	2.92E-6	9.01E-6	4.78E-8	-6.08E-4	1.49E-3
ODP	kg CFC11 eq	8.78E-8	1.98E-9	1.60E-8	1.06E-7	1.90E-9	1.31E-9	7.02E-11	-2.45E-8	8.45E-8
AP	mol H+ eq	1.18E-1	5.13E-5	2.28E-4	1.18E-1	4.69E-5	8.31E-5	1.63E-6	-9.14E-3	1.09E-1
EP-fw	kg P eq	9.44E-4	7.02E-8	7.33E-7	9.45E-4	6.78E-8	4.49E-7	1.95E-9	-7.59E-5	8.69E-4
EP-m	kg N eq	6.11E-3	1.80E-5	5.77E-5	6.18E-3	1.68E-5	2.01E-5	8.24E-7	-1.06E-3	5.16E-3
EP-T	mol N eq	8.93E-2	1.99E-4	5.19E-4	9.00E-2	1.85E-4	2.29E-4	6.21E-6	-1.48E-2	7.57E-2
POCP	kg NMVOC eq	2.38E-2	5.66E-5	1.72E-4	2.40E-2	5.29E-5	6.52E-5	1.85E-6	-3.45E-3	2.07E-2
ADP-mm	kg Sb eq	7.52E-3	2.20E-7	7.65E-7	7.52E-3	2.13E-7	3.60E-7	1.57E-9	-3.51E-3	4.01E-3
ADP-f	MJ	1.74E+1	1.32E-1	1.86E+0	1.94E+1	1.26E-1	1.35E-1	4.80E-3	-5.33E+0	1.44E+1
WDP	m3 depriv.	1.17E+0	4.02E-4	1.54E-2	1.19E+0	3.88E-4	1.13E-3	1.95E-4	-3.17E-1	8.75E-1
PM	disease inc.	2.68E-7	7.69E-10	1.68E-9	2.70E-7	7.44E-10	1.20E-9	3.18E-11	-3.50E-8	2.37E-7
IR	kBq U-235 eq	6.24E-2	5.75E-4	1.43E-3	6.44E-2	5.53E-4	5.51E-4	2.01E-5	-2.50E-2	4.06E-2
ETP-fw	CTUe	1.16E+3	1.07E-1	1.06E+0	1.17E+3	1.03E-1	4.20E-1	3.86E-3	-1.64E+2	1.00E+3
HTP-c	CTUh	1.69E-8	3.81E-12	4.58E-11	1.70E-8	3.65E-12	1.66E-11	7.78E-14	-3.68E-9	1.33E-8
HTP-nc	CTUh	1.36E-6	1.27E-10	9.08E-10	1.36E-6	1.22E-10	4.66E-10	2.41E-12	-2.35E-7	1.13E-6
SQP	Pt	1.81E+1	1.12E-1	1.63E-1	1.83E+1	1.08E-1	1.98E-1	1.03E-2	-3.28E+0	1.54E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.78E+0	1.88E-3	1.69E+0	5.47E+0	1.81E-3	1.39E-2	5.81E-5	-9.81E-1	4.51E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.78E+0	1.88E-3	1.69E+0	5.47E+0	1.81E-3	1.39E-2	5.81E-5	-9.81E-1	4.51E+0
PENRE	MJ	1.86E+1	1.40E-1	2.05E+0	2.08E+1	1.34E-1	1.43E-1	5.10E-3	-5.69E+0	1.54E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.86E+1	1.40E-1	2.05E+0	2.08E+1	1.34E-1	1.43E-1	5.10E-3	-5.69E+0	1.54E+1
PET	MJ	2.24E+1	1.42E-1	3.74E+0	2.63E+1	1.36E-1	1.57E-1	5.16E-3	-6.67E+0	1.99E+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	3.10E-2	1.48E-5	4.37E-4	3.14E-2	1.43E-5	5.56E-5	5.22E-6	-8.58E-3	2.29E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.38E-4	3.34E-7	2.21E-6	9.40E-4	3.23E-7	3.28E-7	7.03E-9	-4.41E-4	5.00E-4
NHWD	kg	4.62E-1	8.08E-3	1.03E-2	4.80E-1	7.84E-3	5.29E-3	3.14E-2	-1.53E-1	3.72E-1
RWD	kg	5.28E-5	8.95E-7	1.67E-6	5.54E-5	8.60E-7	6.79E-7	3.16E-8	-1.99E-5	3.71E-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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