

Environmental Profile

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

Ecochain v3.5.71



Product: 3031477 - Hep20 Brass Elbow 90° 15x1/2 PF/TM
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	7.28E-1	4.29E-3	6.70E-2	7.99E-1	3.93E-3	1.59E-2	2.21E-4	-2.01E-1	6.18E-1
GWP-f	kg CO2 eq	7.26E-1	4.28E-3	6.16E-2	7.92E-1	3.92E-3	1.61E-2	2.21E-4	-1.98E-1	6.14E-1
GWP-b	kg CO2 eq	3.65E-4	2.56E-6	5.45E-3	5.81E-3	2.38E-6	-1.44E-4	2.92E-7	-2.92E-3	2.75E-3
GWP-luluc	kg CO2 eq	9.66E-4	1.53E-6	1.53E-5	9.83E-4	1.39E-6	4.50E-6	2.30E-8	-2.86E-4	7.04E-4
ODP	kg CFC11 eq	4.20E-8	9.86E-10	7.63E-9	5.06E-8	9.04E-10	6.60E-10	3.38E-11	-1.17E-8	4.05E-8
AP	mol H+ eq	5.55E-2	2.57E-5	1.14E-4	5.56E-2	2.23E-5	4.09E-5	7.85E-7	-4.32E-3	5.14E-2
EP-fw	kg P eq	4.43E-4	3.50E-8	3.60E-7	4.44E-4	3.23E-8	2.19E-7	9.42E-10	-3.57E-5	4.08E-4
EP-m	kg N eq	2.88E-3	9.04E-6	2.81E-5	2.92E-3	8.00E-6	1.00E-5	4.26E-7	-5.05E-4	2.43E-3
EP-T	mol N eq	4.21E-2	9.96E-5	2.55E-4	4.24E-2	8.81E-5	1.14E-4	3.00E-6	-6.99E-3	3.56E-2
POCP	kg NMVOC eq	1.12E-2	2.84E-5	8.43E-5	1.13E-2	2.52E-5	3.25E-5	9.00E-7	-1.64E-3	9.76E-3
ADP-mm	kg Sb eq	3.53E-3	1.10E-7	3.93E-7	3.53E-3	1.01E-7	1.75E-7	7.59E-10	-1.65E-3	1.88E-3
ADP-f	MJ	8.45E+0	6.56E-2	8.93E-1	9.40E+0	6.02E-2	6.80E-2	2.32E-3	-2.61E+0	6.92E+0
WDP	m3 depriv.	5.58E-1	2.00E-4	7.53E-3	5.66E-1	1.85E-4	6.57E-4	9.18E-5	-1.51E-1	4.16E-1
PM	disease inc.	1.26E-7	3.84E-10	8.33E-10	1.28E-7	3.54E-10	5.86E-10	1.53E-11	-1.67E-8	1.12E-7
IR	kBq U-235 eq	2.96E-2	2.87E-4	6.94E-4	3.06E-2	2.63E-4	2.73E-4	9.72E-6	-1.17E-2	1.94E-2
ETP-fw	CTUe	5.46E+2	5.32E-2	5.33E-1	5.47E+2	4.89E-2	2.09E-1	1.94E-3	-7.71E+1	4.70E+2
HTP-c	CTUh	7.94E-9	1.90E-12	2.30E-11	7.97E-9	1.74E-12	8.43E-12	3.82E-14	-1.73E-9	6.25E-9
HTP-nc	CTUh	6.39E-7	6.32E-11	4.59E-10	6.39E-7	5.83E-11	2.29E-10	1.18E-12	-1.10E-7	5.29E-7
SQP	Pt	8.50E+0	5.57E-2	8.10E-2	8.64E+0	5.15E-2	9.64E-2	4.99E-3	-1.54E+0	7.25E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.78E+0	9.37E-4	8.75E-1	2.66E+0	8.64E-4	6.77E-3	3.01E-5	-4.61E-1	2.20E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.78E+0	9.37E-4	8.75E-1	2.66E+0	8.64E-4	6.77E-3	3.01E-5	-4.61E-1	2.20E+0
PENRE	MJ	9.02E+0	6.97E-2	9.83E-1	1.01E+1	6.39E-2	7.22E-2	2.46E-3	-2.79E+0	7.41E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.02E+0	6.97E-2	9.83E-1	1.01E+1	6.39E-2	7.22E-2	2.46E-3	-2.79E+0	7.41E+0
PET	MJ	1.08E+1	7.06E-2	1.86E+0	1.27E+1	6.48E-2	7.90E-2	2.49E-3	-3.25E+0	9.62E+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	1.47E-2	7.39E-6	2.14E-4	1.49E-2	6.81E-6	3.24E-5	2.53E-6	-4.08E-3	1.09E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.40E-4	1.67E-7	1.05E-6	4.41E-4	1.54E-7	1.63E-7	3.37E-9	-2.07E-4	2.35E-4
NHWD	kg	2.18E-1	4.03E-3	4.87E-3	2.26E-1	3.73E-3	2.76E-3	1.50E-2	-7.18E-2	1.76E-1
RWD	kg	2.52E-5	4.47E-7	7.93E-7	2.64E-5	4.09E-7	3.37E-7	1.52E-8	-9.37E-6	1.78E-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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